

AD-A144 834

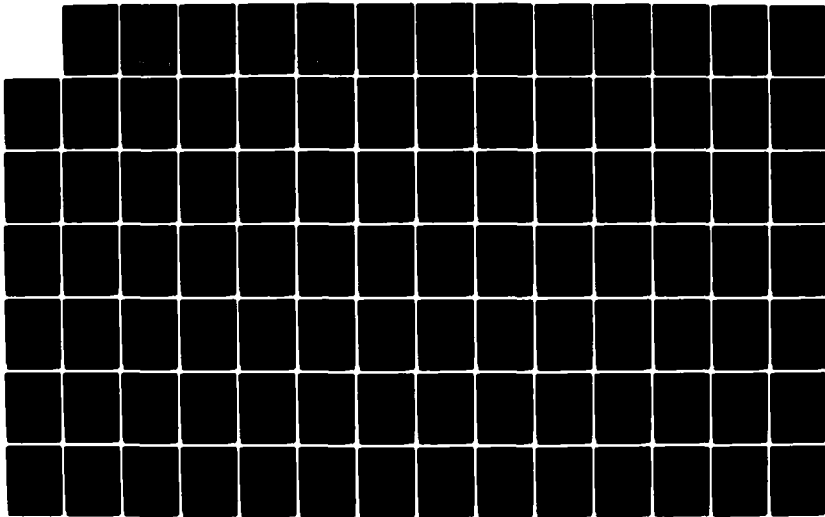
SOVIET CIVIL DEFENSE PUBLIC INSTRUCTION AND TRAINING
PROGRAMS(U) SCIENCE APPLICATIONS INC MCLEAN VA CENTER
FOR SOVIET STUDIES L GOURE AUG 84 SAI-84/1298
EMW-C-0571

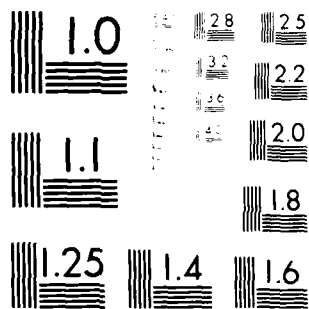
1/2

UNCLASSIFIED

F/G 5/9

NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

12

SOVIET CIVIL DEFENSE PUBLIC INSTRUCTION AND TRAINING PROGRAMS

FINAL REPORT

AUGUST 1984

Prepared for:

Federal Emergency Management Agency
Washington, D.C. 20472

FEMA Contract No. EMW-C-0571
FEMA Work Unit No. 4212F

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

DTIC FILE COPY

AD-A144 834



SCIENCE APPLICATIONS, INC.
Center for Soviet Studies
1710 Goodridge Drive
McLean, Virginia 22102

DTIC
SELECTED
AUG 24 1984
E

84 08 17 062

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

20. ABSTRACT (Continued)

working adults and non-working adults. The objective is to teach the population, by means of annual civil defense courses, appropriate actions in response to civil defense warning signals for its protection, as well as skills to enable it to contribute to the implementation of civil defense measures. There have been eight civil defense public instruction programs for working adults since 1955. From 1973 to 1983, the program provided for 20 hours of repetitive annual instruction. In 1983, a three-year course was introduced, also calling for 20 hours of annual instruction, but intended to further upgrade the population's knowledge of civil defense. Soviet authorities acknowledge that the program has encountered indifference, apathy, and skepticism on the part of some elements of the population, due in part to the repetitiveness of the instruction and to cases of poor quality of instruction. While the authorities have attempted to overcome public skepticism of the effectiveness of civil defense, this problem appears to persist. It is estimated that the instruction program uses at least some 250,000 part-time instructors. The instruction program is reinforced by civil defense propaganda in the mass media, the use of films, public lecture programs, exhibits and posters, and the publication of large numbers of pamphlets and manuals. Despite its shortcomings, it appears that the majority of Soviet citizens have been exposed to multiple civil defense instruction courses which enhance the probability that in an emergency they will act effectively in accordance with civil defense instruction and will be able to take advantage of measures for their protection.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

DETACHABLE SUMMARY

SOVIET CIVIL DEFENSE
PUBLIC INSTRUCTION AND TRAINING PROGRAMS

Dr. Leon Goure

August 1984



Prepared for:

Federal Emergency Management Agency
Washington, D.C. 20472

Contract No. EMW-C-0571

FEMA Work Unit No. 4212F

Accession For	
NTIS GRA&I	<input checked="checked" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	

FEMA REVIEW NOTICE:

This report has been reviewed in the Federal Emergency Management Agency and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Federal Emergency Management Agency.

Approved for Public Release; Distribution Unlimited



SCIENCE APPLICATIONS, INC.
Center for Soviet Studies
1710 Goodridge Drive
McLean, Virginia 22102

given up to 32 hours of civil defense instruction, and those in institutions of higher learning 40 hours or more. Since 1973, the working population has been required to undergo a minimum of 20 hours of instruction annually in its free time, while at the present time, the non-working adults are subject to at least 12 hours of instruction. In principle, therefore, in excess of 200 million Soviet citizens not serving in the civil defense forces are supposed to undergo annual instruction in civil defense.

The basic subjects covered by the instruction courses include: effects of nuclear, chemical, bacteriological, and conventional weapons; civil defense warning signals and how to act according to them; uses of gas masks and protective suits and how to adapt cloth masks and ordinary clothing for protective purposes; use of blast shelters and construction of fallout shelters; evacuation and dispersal; first aid and personal decontamination; actions in the event of natural disasters; post-attack (or natural disaster) rescue and damage-limiting operations; and for the rural population, methods of protection of livestock, stocks of food, grain, fodder, water sources, etc.

There are also additional subjects taught to various groups depending on the character of their studies in the case of students or responsibilities in the case of adults. For example, students in the 9th and 10th grades learn to use radiation measuring instruments and chemical detection kits and how to operate radiation and chemical observation-monitoring posts. Students in middle-level technical schools and institutions of higher learning receive additional instruction according to their fields of study, i.e., medical, engineering, construction, agronomy, transportation, etc., in order to prepare them for duties in the various civil defense services and their formations. Working and non-working adults are also taught blackout and fire prevention measures for their residences, protection of food, protective measures at the work place, behavior in contaminated areas, actions for the protection of children, etc.

DETACHABLE SUMMARY

The Soviet Union has a long-standing civil defense public instruction program which the leadership believes to be essential for an effective civil defense capability and readiness to deal with a nuclear war threat. The primary objective of the instruction program is to ensure that in an emergency the population will act in an organized and purposeful manner in response to civil defense signals and orders, will know how to make effective use of civil defense facilities and equipment, and also will be able to actively contribute to the implementation of civil defense measures. A secondary objective is to instill in the population loyalty to the regime, patriotism, and support of Soviet foreign and defense policies, as well as discipline. Thus, in addition to training programs for the large civilian part-time and defense forces of some 16 to 20 million, the Soviet population has been subjected since 1955 to a succession of eight compulsory civil defense instruction courses of different lengths, all of which have taken a number of years to complete.

The pervasiveness of the instruction program is assured by the organization of compulsory instruction courses for three elements of the general population: school children and students; working adults—i.e., workers, employees, and collective farm workers; and non-working adults—i.e., retirees, self-employed persons, and housewives. Instruction in secondary and vocational schools, middle-level technical schools, and institutions of higher learning is a part of the curriculum. Instruction of working adults is carried out at places of work, and in the case of non-working adults, at places of residence.

At the present time, instruction in secondary schools is given in the 2nd grade (5-8 hours), 5th grade (15 hours), and 9th-10th grades (32 hours), and is supplemented by civil defense training while school children attend Pioneer Camps and participate in paramilitary games (Zarnitsa and Orlenok). Students in middle-level technical schools are

Over the years, the instruction program has sought to emphasize practical training over theoretical instruction, although much of the instruction has remained of the latter type. The instruction program is supplemented by a large civil defense propaganda program which makes use of all elements of the mass media, as well as of public lectures, films, exhibits, and so on.

Although the Soviet authorities claim that the instruction program has been largely successful, they also acknowledge instances of shortcomings in its implementation and that it has not met all of its objectives. The causes of shortcomings are organizational, bureaucratic, and practical, as well as attitudinal. The implementation of the program has suffered from bureaucratic inertia, unwillingness of some managers and local officials to devote the necessary attention and time to it, frequent instances of low quality instruction, and indifference of local authorities to the instruction of non-working adults. While the repetitiveness of the annual 20-hour instruction course given since 1973 may have been intended to ensure retention of information by the working adults, it has also tended to generate boredom and indifference to instruction among the trainees. Apparently a current attempt to remedy this was the introduction in 1983 of a three-year instruction course for the working population which is supposed to take advantage of the populations existing knowledge and give more emphasis to practical training. It also provides in each successive year of the course for further elaboration of the preceding year's instructions as well as additional study topics. The introduction of this three-year course has required the retraining of all civil defense instructors.

In the matter of public attitude towards civil defense, Soviet authorities acknowledge that in addition to boredom and indifference, some elements of the population are skeptical about the effectiveness of civil defense as a means of protection against nuclear weapons. Other reasons for public skepticism include the widespread popular expectation that a war may begin with an enemy surprise attack which

would prevent the implementation of many civil defense measures such as evacuation and also the view that the Soviet system is highly inefficient and, therefore, would not be able to execute civil defense measures in an emergency in a rapid and effective manner. It should be kept in mind that the attitude of the Soviet population also is influenced by the requirement to give up free time to instruction and by the routine character of the instruction program which has been a long-standing feature in the life of Soviet citizens and lacks the stimulus of being associated with a crisis or the perception of an imminent threat.

Soviet authorities attempt to deal with these attitudes in various ways intended, as they claim, to instill in the population "confidence" and "faith" in the effectiveness of civil defense. This includes: explaining why protective measures can be effective in mitigating the effects of "weapons of mass destruction;" showing people civil defense facilities built for their protection, such as shelters, and involving them in exercises so as to lend greater credibility to the instruction program; appealing to the individuals' self-interest in being able to enhance prospects of survival for themselves and their loved ones (it is implied that a failure to possess civil defense knowledge may contribute to the death of loved ones and friends); appealing to the citizen's civic and patriotic duty to conscientiously carry out programs contributing to the Soviet Union's defense capability; making clear that the citizenry may be conscripted not only to build fallout shelters but also to participate in post-strike rescue and damage-limiting operations; and requiring trainees to pass examinations. Even so, Soviet authorities acknowledge that despite the long-standing instruction program, some elements of the population still do not have a firm grasp of required civil defense knowledge and skills.

Given the magnitude of the scope of the instruction program, it requires a large body of instructors, all the more so as most instruction classes are on the order of 25 to 40 persons. Actually the number of full-time paid personnel involved in the instruction process only includes

supervisory and planning personnel on full-time civil defense staffs, instructors of civil defense schools which exist at various levels, and military instructors in the educational system, whose duties also include the teaching of military subjects, and also 2nd grade and some 5th grade teachers who primarily teach other subjects. Altogether this may represent some 75,000 to 100,000 full-time persons who, however, for the most part have other duties as well.

The working and non-working population is instructed by part-time, unpaid instructors, largely made up of personnel with command or technical responsibilities in the civilian civil defense forces at places of work and in residential areas. The total number of such instructors is not known and depends on the number of classes taught by each instructor, which probably varies a great deal. In theory, if each instructor teaches ten classes (approx. 200 hours) each year, the number of instructors for the working population could be in the range of 270,000 to 440,000. At the very least the number is not less than 150,000. Again, instruction of non-working adults theoretically could require as many as 150,000 to 200,000 instructors, although a portion of them would also be instructors used in the training program for the working population. Thus, at a minimum, the instruction program uses not less than 250,000 part-time instructors, and their number may well be significantly greater—many of whom, however, are said to be not well trained and to be lacking teaching skills.

Despite its magnitude, the direct cost of the instruction program is relatively low because most of the personnel implementing it receives no pay, although instructors who attend classes at civil defense schools (one to two weeks) receive their salaries for that time. However, there are other costs associated with the program such as: administration; cost of instructional equipment, supplies, classroom furniture and training facilities; cost of exercises; cost of the use of the mass media and preparation of propaganda materials; cost of books, manuals, pamphlets, posters, films, public lectures and exhibits,

etc. There is no evidence that the instruction program is insufficiently funded, although there appear to be instances of inadequate support at local levels.

Overall, despite problems and shortcomings, it appears that the great majority of the Soviet population has been exposed repeatedly to instruction in civil defense. This suggests that despite any skepticism, a high percentage of the population probably has sufficient knowledge and skills to act in an emergency in accordance with civil defense signals and orders and to contribute to civil defense measures for its own protection.

FINAL REPORT

SOVIET CIVIL DEFENSE
PUBLIC INSTRUCTION AND TRAINING PROGRAMS

Dr. Leon Goure

August 1984

Prepared for:

Federal Emergency Management Agency
Washington, D.C. 20472

Contract No. EMW-C-0571

FEMA Work Unit No. 4212F

FEMA REVIEW NOTICE:

This report has been reviewed in the Federal Emergency Management Agency and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Federal Emergency Management Agency.

Approved for Public Release; Distribution Unlimited



SCIENCE APPLICATIONS, INC.
Center for Soviet Studies
1710 Goodridge Drive
McLean, Virginia 22102

PREFACE

This report was prepared for the Federal Emergency Management Agency under Contract No. EMW-C-0571 as a part of an ongoing research program on Soviet Civil Defense and its potential implications and lessons, undertaken by the Center for Soviet Studies, Science Applications, Inc.

The objective of this study is to describe and analyze, on the basis of Soviet open-source materials, the Soviet Civil Defense Public Instruction and Training Program: its objectives, role in civil defense, organization, content, methods of instruction, and problems and shortcomings; the attitudes of the population towards compulsory civil defense instruction; how the authorities attempt to deal with public indifference and skepticism; and the magnitude of the Soviet effort. In addition, the study examines some possible useful lessons which may be derived from the Soviet program for U.S. civil defense public instruction.

Relevant to this study are several earlier studies prepared by the author. These include: War Survival in Soviet Strategy: USSR Civil Defense, (Washington, D.C.: Advanced International Studies Institute, 1976); Soviet Post-Strike Civil Defense Rescue, Damage-Limiting, Repair and Restoration Operations, (McLean, VA: Science Applications, Inc. (SAI), Final Report, August 1982); The Soviet Crisis Relocation Program, (McLean, VA: SAI, Final Report, May 1983); and The Soviet Civil Defense Medical Preparedness Program, (McLean, VA: SAI, Final Report, March 1984), all prepared for the Federal Emergency Management Agency, Washington, D.C.

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1 INTRODUCTION	1
2 SOVIET VIEWS ON THE IMPORTANCE, OBJECTIVES AND ROLE OF PUBLIC CIVIL DEFENSE INSTRUCTION AND TRAINING	5
2.1 THE SOVIET CIVIL DEFENSE INSTRUCTION AND TRAINING PROGRAMS SINCE WORLD WAR II	5
2.2 SOVIET VIEWS ON THE IMPORTANCE, OBJECTIVES AND ROLE OF THE CIVIL DEFENSE PUBLIC INSTRUCTION PROGRAM	12
FOOTNOTES.	17
3 THE PERVASIVENESS, ORGANIZATION AND CONTENT OF SOVIET CIVIL DEFENSE PUBLIC INSTRUCTION	21
3.1 THE INSTRUCTION PROGRAM FOR SCHOOL CHILDREN AND STUDENTS AT VOCATIONAL SCHOOLS AND INSTITUTIONS OF HIGHER LEARNING	22
3.1.1 Civil Defense Instruction in Secondary Schools	23
3.1.2 Instruction in Vocational and Middle- Level Technical Schools	27
3.1.3 Instruction in Institutions of Higher Learning	27
3.2 THE INSTRUCTION PROGRAM FOR WORKING ADULTS	29
3.2.1 First Year Instruction	31
3.2.2 Second Year Instruction	37
3.2.3 Third Year Instruction	43
3.3 THE INSTRUCTION PROGRAM FOR NON-WORKING ADULTS	44
3.4 OTHER FORMS OF CIVIL DEFENSE INSTRUCTION OF THE POPULATION	45
FOOTNOTES.	49

Table of Contents, Cont.

Section		Page
4	PUBLIC RECEPTIVITY TO AND EFFECTIVENESS OF THE CIVIL DEFENSE INSTRUCTION PROGRAM	67
4.1	SOVIET VIEWS ON PUBLIC ATTITUDES TOWARDS AND RECEPTIVITY TO CIVIL DEFENSE INSTRUCTION	67
4.2	THE CHARACTER OF SOVIET PUBLIC DOUBTS ABOUT THE EFFECTIVENESS OF CIVIL DEFENSE AND SOVIET METHODS OF DEALING WITH THEM	69
4.3	SOVIET ASSESSMENT OF THE SUCCESSES AND FAILURES OF THE PUBLIC INSTRUCTION AND TRAINING PROGRAMS	68
	FOOTNOTES	74
5	THE SOVIET LEVEL OF EFFORT IN THE CIVIL DEFENSE PUBLIC INSTRUCTION OF THE POPULATION	79
	FOOTNOTES	84
6	POSSIBLE LESSONS FOR THE U.S. CIVIL DEFENSE PUBLIC INSTRUCTION PROGRAM	85
7	CONCLUSIONS	95

Section 1

INTRODUCTION

As a general rule, civil defense measures for protecting the population are only as good as the willingness and intelligent ability of the population to take advantage of them and to behave in a manner which enhances its chances of survival. This is especially so in the case of a threat of a nuclear attack which can place the entire population of a country at risk from prompt and secondary effects of nuclear weapons. In this case, the entire population must actively participate in implementing civil defense measures for its protection. Without such active participation, the planned civil defense measures may either be futile or their effectiveness may be greatly reduced, thereby resulting in unnecessarily greater losses among the population and making post-attack reconstitution and recovery more difficult and significantly slower. Consequently, an effective civil defense program for the protection of the population against the *threat of a nuclear attack* requires instruction of the population in civil defense.

The actual character of a civil defense instruction program for the general population can vary. It will depend on assumptions about the attack and its likely targets, the character of the program for the protection of the population, and the extent of the actions and initiatives the population is called upon to take for its own protection. For example, the population may be required to seek protection in-place in existing shelters built before the attack or it may be instructed to evacuate high-risk areas and seek protection in designated hosting localities in the exurban areas.

During World War II, civil defense instruction of the general population was relatively simple. This was so not only because of the character of the threat but also because of the limited amount of initiatives required of the population. At a minimum, the population had to be able to correctly identify civil defense signals, to know

the location of nearby shelters and slit trenches, and to obey the instructions of the authorities in the matter of blackout and during organized evacuations of cities subjected to repeated air strikes. However, shelters were relatively easy to build or improvise and, in most instances, the evacuations were relatively limited in scale and could be spaced over considerable time. At the present time, the scale of necessary civil defense measures has become much greater and times for their implementation in an emergency much more compressed. Furthermore, nuclear weapons not only pose a direct threat to the population in the targeted localities, but—as a result of fallout—to a much greater area which may include the hosting areas harboring the urban evacuees and local residents. This in turn requires the implementation of protective measures on a large scale also in the exurban areas. Ideally, therefore, every citizen should know not only civil defense warning signals and be ready to respond to them in an appropriate manner, but also the location of best available shelters and—if he has to be evacuated—when he should go, what he should take with him, by what means and routes he should travel to designated hosting areas, and what he should do to enhance his protection when he arrives there. In other words, unless fallout shelters are prepared in advance, the evacuees and local residents will have to participate in the construction and stocking of such shelters. Furthermore, given that medical personnel and facilities will be stretched to the utmost, there would be great utility in the instruction of the population in medical first aid. Finally, the citizenry must have knowledge of how to behave in the immediate post-strike environment, especially in areas contaminated by radioactive fallout, and will probably be required to participate in decontamination activities.

Of course, the extent to which the population will be called upon to show initiative will depend not only on the character of a country's civil defense program and the measures taken to protect the population, but also on its political, governmental, societal and economic system. In particular, it will depend on the extent of the state's control over

the population's actions and the capabilities of the population to act independently, which in turn directly bears on the character of the civil defense instruction program. For example, the availability of private vehicles among the American population provides the latter with the means for independent evacuation of high-risk areas. Thus, in the United States a large portion of the citizens can use their own judgment on when to leave and, unless persuaded to travel to designated hosting areas, where to go. In the Soviet Union, however, the shortage of private transportation makes the urban population dependent on the use of public transportation, which is organized and controlled by the authorities during the population's relocation. This means that the Soviet authorities will have control over the departure of the citizens, their movements, and their destinations. In effect, the only action required of the Soviet citizen is to report at prescribed times to designated evacuation assembly points in cities, all subsequent aspects of the evacuation being under the control of the authorities.

Given the magnitude of the civil defense measures which must be implemented in the event of a threat of nuclear war, the population cannot expect the civil defense organization to do everything for it—thus, the requirement for its active participation in implementing civil defense measures. In order to avoid chaos, which could in a large measure vitiate the effectiveness of the protection measures, the population must not only be familiar with civil defense concepts, plans, and proposed measures, but also have a reasonable degree of confidence in their utility and effectiveness. Thus, civil defense instruction of the population can play a critical role in shaping the population's attitude and behavior in a disaster situation, and it can enhance public acceptance of suggested or ordered actions. This in turn can reduce panic and counter-survival behavior among the population, as well as mitigate the psychological trauma caused by the threat of an attack and of the attack itself. This requires the public to have a fairly realistic appreciation of the nuclear threat, which neither underestimates the danger (thus making the population unwilling or slow to implement

civil defense measures), nor promotes a doomsday view, which engenders a sense of hopelessness and fatalism and also inhibits the effective and timely implementation of these measures.

At the present time, relatively few countries have extensive civil defense instruction programs for the general population, especially instruction programs for a nuclear war situation. The largest and most comprehensive instruction programs of the latter kind are found, in addition to several neutral countries such as Finland, Sweden, and Switzerland, in the communist countries. Most of the programs in the communist countries are modeled on that of the Soviet Union. Naturally, the authoritarian political system in these latter countries greatly facilitates the implementation of civil defense instruction programs for the general population because its participation in the program is compulsory and, therefore, ensures that all or nearly all citizens participate in such programs on a regular basis. Furthermore, it allows the authorities to tailor the instruction programs to the needs of specific elements of the population in accordance with their role in the civil defense system, their age groups, and whether they live in urban or rural areas.

This is not to say that the Soviet civil defense instruction program is devoid of shortcomings. These shortcomings, however, are not the result of conceptual flaws, but rather occur in various places because of the manner in which the instruction program is implemented. While the Soviet authorities pay a great deal of attention to these shortcomings and seek to rectify them, their significance should not be exaggerated. The very repetitiveness of instructions to which Soviet citizens are exposed—from their attendance of secondary schools to their retirement from work—tends to insure a reasonable level of retention of the civil defense instructions by the population.

Section 2

SOVIET VIEWS ON THE IMPORTANCE, OBJECTIVES AND ROLE OF PUBLIC CIVIL DEFENSE INSTRUCTION AND TRAINING

2.1 THE SOVIET CIVIL DEFENSE INSTRUCTION AND TRAINING PROGRAMS SINCE WORLD WAR II

Although the Soviet Union has had some form of civil defense program since the 1920's, the Soviets date USSR Civil Defense from a decree of the USSR Council of People's Commissars of October 4, 1932. Civil Defense was then called Local Anti-Air Defense (MPVO). Civil defense instruction of the population was carried out by the mass public Society for Assistance to Defense and to Aviation and Chemical Construction of the USSR—usually known by its acronym, Osoaviakhim, with the assistance of the Union of Red Cross and Red Crescent Societies, trade-unions, the Young Communist League (Komsomol), and other public organizations.^{1/} By the time of the German attack on the Soviet Union in June 1941, some 40 million civilians residing in regions believed to be threatened by possible air attacks had undergone a 20-hour civil defense instruction program.^{2/} On July 2, 1941, the USSR Council of People's Commissars issued a decree on the "Universal, Mandatory Air Defense Training of the Civilian Population," according to which all citizens between the age of 16 and 60 were required to undergo a 28-hour civil defense instruction course, and all men between the age of 16 and 60 and women between the age of 18 and 55 could be required to serve in civil defense units.^{3/} In effect, the Soviet population has remained liable to civil defense instruction since that time. In 1942 there were in excess of 6 million persons serving in these units. In all, Soviet sources claim that in the course of the war, over 137 million persons received instruction in civil defense.^{4/}

Following the war the civil defense organization and program were revised. Supervision and direction of the MPVO remained as it had been since the start of the war with the USSR Ministry of Internal Affairs (earlier called the USSR People's Commissariat of Internal Affairs).

It was recognized that the Soviet Union was required to maintain a large, trained civil defense force and to instruct the population in civil defense. However, not until 1954—after Stalin's death—did civil defense recognize that it had to take the nuclear threat into account. Until then, civil defense instruction—carried out in study circles organized by the Voluntary Society for Assistance to the Army, Air Force, and Navy (DOSAAF), which replaced Osoaviakhim in 1948—continued to deal only with conventional war threats.

In 1955 a 12-hour instruction program to train the population in "anti-atomic defense" was introduced. This was the first of a series of eight instruction courses for the general population carried out up to the present time.^{5/} The course dealt with descriptions of the effects of atomic as well as conventional weapons and the various means of delivering them, the use of gas masks, the construction and use of shelters, blackout measures, first aid, firefighting, rescue of casualties and decontamination procedures, and taught how to act in response to various civil defense warning signals.^{6/} It was claimed that over 100 million persons had completed the course by early 1957.^{7/}

This was followed by a two-phase instruction program for the general population. The first was a 22-hour program called "Ready for Anti-Air Defense, 1st Stage," which ran well into 1959.^{8/} In principle, the program was intended to instruct "the entire population in measures of protection against modern means of mass destruction,"^{9/} i.e., nuclear, chemical and bacteriological. It also included students in secondary schools who were members of DOSAAF.^{10/} Persons undergoing the course were expected to pass tests, i.e., "norms," to demonstrate their knowledge of the subjects covered in the instruction and their skills in applying various methods of self-protection. As before, the instructions were given in DOSAAF study circles. In addition, DOSAAF trained public instructors who were to instruct other elements of the population. At the same time, personnel assigned to civil defense formations received instruction according to a special program.

Although Soviet publications claimed great success in carrying out the instruction program, in fact it fell well short of including the entire adult population, and there were numerous reports of instances of poor quality instruction and of shortages of training materials.^{11/} Nevertheless, it appears that a major part of the population received some sort of civil defense instruction.

In 1958 a second phase of the program was approved, called "Ready for Anti-Air Defense, 2nd Stage." This was a 14-hour program intended to build on the previous one and emphasized "practical work" which the citizens may be called upon to perform in an emergency in support of civil defense formations and to protect themselves against radioactive fallout.^{12/} Instruction was to be carried out at places of work and residence, and include all males ages 16 to 60 and women up to age 55 who had successfully passed the norms of the First Stage instruction program. Again there were shortcomings in the implementation of the program which, in many areas, was acknowledged to have been completed only in 1961.

A new 18-hour instruction program for the general population, the fourth in the series, was announced in 1960. Like the preceding one, it focused on the instruction of the working population. It was intended "to teach each citizen individual actions of self-protection" as well as "inculcate in the population practical knowledge in carrying out simple work for dealing with the effects of an attack from the air, individually and as a part of the mass units of the MPVO (i.e., Civil Defense)."^{13/} Subjects covered included the purpose and functions of MPVO and its measures to protect the population, uses of shelters, fire-fighting, rescue and first aid, actions in contaminated areas, and decontamination procedures.^{14/}

In 1961 a major reorganization of Soviet civil defense took place. Its name was changed from "Local Anti-Air Defense" (MPVO) to "Civil Defense" (Grazhdanskaya Oborona), and responsibility for it was shifted from the USSR Ministry of Internal Affairs to the USSR Ministry

of Defense. In effect, USSR Civil Defense was placed under military control and made an integral part of the Soviet Union's defense posture and capability. USSR Civil Defense progressively took over from DOSAAF the responsibility for civil defense instruction of the population, and the scope and organizational structure of civil defense were expanded. In particular, greater emphasis than hitherto was placed on the national character of the civil defense program in recognition of the fact that the entire territory of the USSR and all of its population were potentially at risk from enemy strikes with nuclear armed missiles.

The 18-hour civil defense instruction program for the general population was said to be completed by 1962. However, while being credited with some good results, it was also acknowledged to show that "many citizens needed additional theoretical instruction in coordination with elements of practical actions."^{15/} Consequently, a new 19-hour instruction program was announced. This program included—in addition to subjects covered in previous courses—some new ones such as the making of individual means of protection of respiratory organs, i.e., gauze masks; measures carried out at economic facilities to improve their mobility; duties of the population during evacuation; and further instruction in first aid.^{16/} Instruction, which was supervised by the executive committees of the local elected Soviets (Councils), was still conducted by DOSAAF and the Red Cross in study groups of 25 persons, organized primarily at work places. Each instructor was to teach two groups. While previously the public instructors trained by DOSAAF often received only some 25 hours of instruction themselves, in the new program they were required to undergo training in a network of civil defense schools organized by local civil defense organizations.^{17/} An increasing number of instructors were reserve or retired officers, engineers, and public health workers. Greater efforts were made to improve the availability of training materials, manuals, posters, and films.

In 1966, a sixth instruction course of 21 hours was announced, called "Program for the Preparation of the Population in Civil Defense

(Universal Mandatory Minimum Knowledge)" to begin in 1967.^{18/} Training was to be conducted at places of work and in schools, and for non-working adults at places of residence. Instruction was by the civil defense organization on the principle of "leaders instructing subordinates." The instruction program was intended to instill knowledge about: the effects of nuclear, chemical, and bacteriological weapons; methods of protection against them; uses of individual and collective means of protection, including construction of rapidly erectable shelters; actions in response to civil defense signals; how to act during evacuation; actions in areas of radioactive, chemical, and bacteriological contamination; first aid and rendering aid to others; and organization, means, and methods of conducting rescue work in areas of nuclear destruction.^{19/} The emphasis was said to be on instilling "practical skills" and therefore a portion of the course was devoted to practical exercises.^{20/} Rewards and prizes were offered to "activists" and various types of competitions were held to stimulate interest.

The new program also provided for 15 hours of instruction in civil defense for students in each of the fifth, sixth and seventh grades of the Soviet eight and ten year secondary schools.^{21/} This was in addition to the 35 hours of civil defense and military instruction given to students in the ninth grade. In the new program, the students were taught the effects of nuclear, chemical, and bacteriological weapons; how to respond to civil defense signals; how to adapt various structures for use as shelters and how to build fallout shelters; first aid; the use of gas masks and chemical defense suits; rescue work; and decontamination. In addition, the school children received civil defense instruction and participated in exercises during their stay in Pioneer summer camps and while playing in the "Zarnitsa" (Dawn) para-military game which included 12 hours of civil defense lectures and exercises.

This period also saw significant improvements in the availability of training materials, civil defense literature, and films. A basic instruction pamphlet for the general population entitled Everyone Must

Know This, prepared under the auspices of USSR Civil Defense and the union republics' civil defense staffs, was published in millions of copies. This pamphlet—later renamed Everyone Must Know and Be Able To Do This—has been published since that time with some revisions in six editions for use as the basic text for the minimum compulsory instruction program for the general population. The pamphlet costs 5 kopeks or less than U.S. 5 cents at the official rate of exchange.

Although the 21-hour instruction program was claimed to have been largely completed in 1969, in fact it remained in effect until 1972. In part this was due again to many shortcomings in its implementation, such as poor organization, low quality of instruction, inattention on the part of managers of economic institutions, and apathy among the population.^{22/} Still it was evident that many millions of Soviet citizens, in addition to those serving in civil defense units, had been exposed to the instruction course.^{23/}

A seventh civil defense instruction program was initiated in 1973 following an intensive review of the civil defense program as a whole, which resulted in some organizational changes and in an upgrading of the status of civil defense. The aging chief of USSR Civil Defense, Marshal of the Soviet Union Chuikov, was replaced by a younger officer, Colonel General A.T. Altunin, who soon thereafter was promoted to the rank of General of the Army and was appointed Deputy USSR Minister of Defense like the other service chiefs of the Soviet Armed Forces. Under Altunin, the implementation of the Soviet civil defense program appears to have been stepped up. One aspect of this has been increased efforts to ensure the participation of the entire population in the civil defense instruction program, along with improvements in the quality of instruction and in the availability of instruction materials, the construction of training facilities, and the holding of comprehensive civil defense exercises.

The 1973 program provided for a universal, mandatory minimal civil defense instruction course of 20 hours for all working adults.

Until 1983 this course was repeated yearly. Students and retirees have their own instruction programs, as have also civilians assigned to civil defense units. Consequently, for purposes of instruction, the population was and continues to be divided into a number of categories:^{24/}

1. Chiefs and unit commanders of civil defense forces:

According to law, each head of a governmental-administrative, economic, educational, scientific, transportation, communications, etc. organization, institution, department or facility is designated as chief of civil defense for the personnel under his control. Civil defense unit commanders are department and shop heads, technical specialists, engineers, etc. All undergo special instruction in civil defense schools and at their places of work.

2. Personnel of civilian civil defense formations: The size of the Soviet civilian part-time civil defense force is estimated at 16 to 20 million. Training of these units is tailored to their specific functions or missions.

3. Working population not serving in civil defense units: This group is required to undergo the annual 20-hour instruction course.

4. Non-working adults, i.e., retirees and housewives: These persons undergo an abridged instruction course.

5. Students in secondary, vocational, and technical schools and institutions of higher learning: Each category of students has its own instruction program.

As in the preceding 21-hour program, the 20-hour program for the population was conducted at places of work or study and at places of residence for non-working adults. As was noted, the instruction program involved the entire population from ages 7-8 to 60 and older. The program ensured continuous exposure of the Soviet population to instruction in civil defense, first through the educational system and then in yearly courses for adults. Furthermore, the instruction program was backed by a large civil defense propaganda effort carried out in the press, on radio

and television, and in public lectures and films, as well as by the use of posters and exhibits.

2.2 SOVIET VIEWS ON THE IMPORTANCE, OBJECTIVES AND ROLE OF THE CIVIL DEFENSE PUBLIC INSTRUCTION PROGRAM

Instruction of the population in civil defense is considered by the Soviet leadership to be an essential, integral element of the Soviet civil defense program. It is seen not only as constituting "one of the most important measures" for the protection of the population itself, but also as critical for the ability of USSR Civil Defense to implement measures to protect the economy and to deal with the consequences of enemy strikes. Essentially, the Soviets believe that effective civil defense requires not only a large, trained civil defense force but also the active, purposeful participation of the entire population in the implementation of civil defense measures. The Soviet citizen must not only know what to do in the event of a natural disaster or an enemy attack and implement the orders of the civil defense authorities in an organized and disciplined manner, but he may also be called upon to assist the civil defense forces and participate in their operations.^{25/}

According to the deputy chief of USSR Civil Defense for Combat Training:

The basic component of the civil defense training which the Soviet people undergo has been and remains a program designed to help them develop a set of well-grounded skills and a fund of reliable knowledge which will enable them to take appropriate actions to protect themselves, their relatives and friends, and their workplace, section and facility as a whole from the effects of weapons of mass destruction.^{26/}

In addition, the population must be prepared "to take a most active part in eliminating the consequences of enemy nuclear strikes."^{27/}

The participation of the Soviet population in civil defense is not only compulsory but a "patriotic duty" of every Soviet citizen,

mandated by the Soviet Constitution, which makes it a duty for the citizens to help strengthen the defenses of the Soviet Union. It is said that:

Civil defense is an affair of all the people. All Soviet citizens are vitally interested in the successful implementation of its tasks at enterprises, offices, organizations, collective farms and state farms. It is the duty of every citizen of our country to actively participate in the implementation of civil defense measures.^{28/}

The current edition of the basic civil defense instruction pamphlet for use by the general population points out that:

Every Soviet citizen must know, in the event of an enemy missile-nuclear attack, how to protect himself and his family and how to render aid to the injured. This is why it is essential to study already in peacetime the means and methods of protection against weapons of mass destruction and know how to apply them in practice.

The conscientious carrying out of obligations in civil defense is a patriotic duty for all USSR citizens, a most important condition for the protection of the population against weapons of mass destruction.^{29/}

The instruction program is said to pursue achievement of a number of objectives.^{30/} First, it seeks to instill in the population knowledge about the threat and about civil defense measures and methods of protection against nuclear, chemical, and bacteriological weapons and peacetime disasters. Second, it seeks to teach the population how to act in emergencies and to obey civil defense instructions and rules. Third, it is intended to prepare the population for active participation in the implementation of measures for its own protection, such as the construction of shelters, the protection of economic resources, and post-strike rescue and damage-limiting operations. It is asserted that "without the mass participation of the entire population of the country, it is impossible to implement protection measures rapidly and of the required quality."^{31/} Fourth, the citizenry must be prepared

psychologically and, as the Soviets put it, in a "morale-political" sense, for the shock of an enemy attack to retain its ability to act in a steadfast, courageous, purposeful, and disciplined manner in the most difficult conditions of a nuclear war. Put another way, the Soviet citizen should be capable of "independently evaluating a situation, making appropriate decisions, and then taking skillful, effective actions appropriate to the given conditions" without panic or becoming paralyzed by fear.³²⁷

More specifically, basic knowledge and skills which the instruction program aimed at instilling in every Soviet citizen include:³²⁸

- How to recognize civil defense warning signals and how to respond to them.
- The location of shelters near one's residence and workplace, how to use them, and how to build fallout shelters and adapt underground structures for use as shelters.
- How to use gas masks and protective suits and how to make simple cloth masks to protect respiratory organs and adapt ordinary clothes for protective purposes.
- How to take blackout and fire prevention measures and measures to protect one's residence against the penetration of radioactive dust.
- How to protect food and water supplies in the homes.
- How to act quickly in an organized and disciplined manner during the evacuation of urban residents from high-risk areas.
- How to administer first aid to oneself and to others.
- How to act in areas contaminated by radioactive fallout and chemical or bacteriological agents.
- How to decontaminate one's skin surfaces, clothing and shoes.
- How to protect livestock, food stocks and water sources (in the case of the rural population).
- How to conduct rescue actions in areas of nuclear destruction and natural disasters.

In the case of civil defense forces, these basic skills receive further elaboration and development or additional ones are added, depending on the specific functions of the units—for example, rescue, first aid or medical assistance, firefighting, road clearing, radiological reconnaissance, shelter service, transportation, repair, decontamination, and so on.^{34/}

The objective of preparing the population psychologically for a nuclear war situation and to maintain high morale and readiness for action in it is considered to be of great importance. Indeed, it is said to be "one of the most important tasks of civil defense propaganda."^{35/} The Soviets believe that this can be achieved through political indoctrination, as well as by civil defense instruction and exercises. It is recognized that the two main problems faced by USSR Civil Defense in this respect are doubts or skepticism among the population about the feasibility of survival in a nuclear war and panic. For example, Soviet publications have mentioned that:

The entire Soviet population is preparing for protection against weapons of mass destruction. However, often now we can encounter people who have a flippant and frivolous attitude toward civil defense. As a rule, they erroneously assume that there can be no protection against nuclear weapons and that if war should occur, everything living allegedly will perish. Such reasoning can bring nothing but harm, indeed, irreparable harm.^{36/}

In a similar vein, it is noted that:

Panic may be brought about by a feeling of uncertainty, defenselessness and loneliness, or by insufficient knowledge...by poor mastery of protective equipment and the inability to act skillfully in contaminated areas.^{37/}

It is also said that panic may be caused by a lack of effective leadership and control, by poor organization, and by rumors.^{38/}

One important way of dealing with this problem is to instill in the population "deep faith" and "confidence" in the effectiveness and

reliability of civil defense measures carried out for its protection.^{39/}
Thus, the Chief of USSR Civil Defense, Army General A.T. Altunin, has warned that:

The effectiveness of all of the civil defense measures carried out by us will depend to a considerable degree upon the psychological readiness of the population... However, these well thought-out measures may not produce the desired results if we fail first of all to inspire confidence in their effectiveness and, secondly, if we fail to teach our people how to perform correctly and purposefully while carrying out all of the planned measures.^{40/}

Altunin pointed out that it is "very important" to give the people "the correct understanding of a future war, to instill in them faith in the effectiveness of the methods and means of protection against weapons of mass destruction."

In a word, it is necessary to convince students and workers...that as a result of effective measures taken for protection against the destructive effects of modern weapons, there is an enormous difference between the potential of the most deadly weapon and the actual consequences of their use.^{41/}

Presumably, familiarity with civil defense measures for the protection of the population and instruction in their effectiveness and use help give the population confidence in civil defense and, therefore, also justifies the need for it and for the civil defense instruction of the population.

Section 2

FOOTNOTES

1. L. Goure, Civil Defense in the Soviet Union, (Berkeley, CA: University of California Press, 1962), pp. 203; K.G. Kotlukov, K.S. Ogloblin, A.I. Sgilevskiy, Ot MPVO k Grazhdanskoj Oborone (From MPVO to Civil Defense), (Moscow: Atomizdat, 1969), pp. 14-18; Colonel General A.T. Altunin, "Principal Stages and Directions of Development of USSR Civil Defense," Voyenno-Istoricheskiy Zhurnal (Military-Historical Journal), No. 11, November 1976, pp. 39-47; Colonel General A.T. Altunin, "Local PVO," Sovetskaya Voenennaya Entsiklopediya (Soviet Military Encyclopedia), Vol. 5, (Moscow: Voenizdat, 1978), pp. 253-254.
2. Goure, op. cit.; Altunin, "Principal Stages...", p. 40; Kotlukov et al., op. cit., p. 21; "In the Name of the Lives of Millions," Voennoye Znaniya (Military Knowledge), No. 6, June 1982, p. 8.
3. Goure, op. cit., p. 6; Altunin, "Principal Stages...", p. 41.
4. Za Oboronu (For Defense), No. 13/14, p. 2.
5. Kotlukov et al., op. cit., p. 61.
6. See Voennoye Znaniya, No. 8, August 1955, p. 26 and No. 12, December 1955, pp. 18-19; V.D. Moskaev et al., editor, Uchebnoye Posobiye po MPVO (Instruction Manual for Local Anti-Air Defense), (Moscow: DOSAAF, 1957), passim; P.M. Kirillov, Dosaafovtsu o MPVO (To the DOSAAF Member About Local Anti-Air Defense), (Moscow: DOSAAF, 1956), passim.
7. Sovetskiy Patriot (Soviet Patriot), February 12, 1958.
8. DOSAAF, Uchebno-Metodicheskoye Posobiye po Provedeniyu Trenirovok i Priyemu Norm 'Gotov k PVO' Pervoy Studeni (Instruction-Methodological Manual for Conducting Training and Passing Norms 'Ready for Anti-Air Defense' First Stage), (Moscow: DOSAAF, 1959), passim.
9. N.P. Miroshnikov and G.N. Zapol'skiy, Zashchita Naseliniya ot Sovremennykh Sredstv Porozheniya (Protection of the Population Against Modern Means of Destruction), (Moscow: DOSAAF, 1959), p. 279.
10. N. Ivanov, Bud' Gotov k PVO (Be Ready for Anti-Air Defense), (Moscow: DOSAAF, 1959), pp. 3-5.
11. See Sovetskiy Patriot for 1957-1959.

12. Goure, op. cit., pp. 57-52, 155-160; K. Kipriyan, Kak Organizovat' Priem Norm 'Gotov k PYO' Vtoroy Stupeni (How to Organize the Passing of the Norms 'Ready for Anti-Air Defense' Second Stage), (Moscow: DOSAAF, 1960); DOSAAF, Uchebno-Metodicheskoye Posobiye po Prakticheskoy Podgotovke Vzroslogo Naseleniya k Deystviyam po Likvidatsii Posledstviy Napadeniya s Vozdukha (Instruction-Methodological Manual for the Practical Training of the Adult Population for Actions During the Liquidation of the Consequences of an Air Attack), (Moscow: DOSAAF, 1960), passim.
13. Kipriyan, op. cit., pp. 3,4.
14. Goure, op. cit., p. 53.
15. Kotlukov et al., op. cit., p. 68.
16. Ibid.
17. Ibid.
18. Ibid., p. 69; Civil Defense Staff of the Lithuanian SSR, Uchebno-Metodicheskoye Posobiye dlya Podgotovki Naseleniya k Grazhdanskoj Oborone (Instruction-Methodological Manual for Training the Population in Civil Defense), (Vilnius: Mintis, 1967), passim.
19. Civil Defense Staff of the Lithuanian SSR, op. cit., pp. 3-4.
20. For example, see Voyennyye Znaniya, No. 5, May 1969, p. 17.
21. Kotlukov, op. cit., p. 71; "Civil Defense Training Program for Students in the Fifth, Sixth, and Seventh Grades of the Eight Year and Secondary Education Schools," Voyennyye Znaniya, No. 9, September 1968, pp. 26-27; V.A. Smelyanskiy, editor, Zanyatiya po Grazhdanskoj Oborone v Pyatom Klasse (Studies of Civil Defense in the Fifth Grade), (Moscow: Prosveshcheniye, 1969), passim; G.I. Goncharenko, Shkol'niku o Grazhdanskoj Oborone (Civil Defense for the School Boy), (Moscow: Atomizdat, 1968), passim.
22. For example, see Marshal of the Soviet Union, "The Pre-Jubilee Year," Voyennyye Znaniya, No. 1, January 1969, pp. 2-3; and Radio Moscow, February 26, 1969.
23. See L. Goure, War Survival in Soviet Strategy: USSR Civil Defense, (Washington, D.C.: Advanced International Studies Institute, 1976), p. 197.
24. Ibid.; P.T. Egorov, I.A. Shlyakhov, N.I. Alabin, Grazhdanskaya Oborona (Civil Defense), 3rd edition, (Moscow: Vysshaya Shkola, 1977), p. 242; S. Kuzovatkin, "To a New Level," Sovetskiy Patriot, March 14, 1973.

25. Egorov et al., op. cit., p. 242; Colonel General A.T. Altunin, "Civil Defense Today," in Lyudi i Dela Grazhdanskoy Oborony (Peoples and Affairs of Civil Defense), (Moscow: Voenizdat, 1974), pp. 10-11; Major General V. Matriyenko, "In Constant Readiness," Kommunist Tadzhikistana (Tadzhik Communist), March 16, 1975; Colonel General V. Dement'yev, "Actively, Purposefully," Krasnaya Zvezda (Red Star), September 1, 1982; Sovet Turkmenistany (Soviet Turkmenistan), August 30, 1983.
26. Lieutenant General D. Mikhaylik, "The Training Year Has Begun," Voyennyye Znaniya, No. 12, December 1983, p. 10.
27. M. Kachulin, "Be Conscientious, Be a Fighter," Voyennyye Znaniya, No. 4, April 1972, p. 18; Army General A.T. Altunin, editor, Grazhdanskaya Oborona; Posobiye dlya Podgotovki Naseleniya (Civil Defense; Training Manual for the Population), (Moscow: Voenizdat, 1980), p. 18, 21.
28. Altunin, Grazhdanskaya Oborona, p. 18.
29. USSR Civil Defense, Eto Dolzhen Znat' i Umet' Kazhdyy (Everyone Must Know and Be Able To Do This) 6th edition, (Moscow: Voenizdat, 1984), p. 4.
30. Altunin, Grazhdanskaya Oborona, pp. 19-23.
31. Ibid., p. 21.
32. Ibid., pp. 22-23; Mikhaylik, op. cit.; "In the Name of the Lives of Millions," Voyennyye Znaniya, No. 6, June 1982, p. 9; Colonel General A.T. Altunin, "The Main Direction," Voyennyye Znaniya, No. 12, December 1973, p. 5.
33. Egorov et al., op. cit., pp. 243-244, 249; Eto Dolzhen Znat' i Umet' Kazhdyy, passim.
34. Goure, War Survival..., pp. 67-76 and Soviet Post-Strike Civil Defense Rescue, Damage-Limiting, Repair and Restoration Operations, Final Report, Science Applications, Inc., August 1982, pp. 23-55, prepared for the Federal Emergency Management Agency, Contract No. EMW-C-0571.
35. V. Shirokov, "Under Party Leadership," Voyennyye Znaniya, No. 6, June 1983, p. 9.
36. Kachulin, op. cit.
37. Colonel N. Federiko, "Psychological Conditioning," Voyennyye Znaniya, No. 5, May 1980, pp. 20-21.

38. Captain Second Rank U. Korn, "In Order to Prevent Panic," Voyennyye Znaniya, No. 3, March 1983, p. 21.
39. Colonel General A.T. Altunin, "An Important Aspect of Training," Uchitel'skaya Gazeta (Teacher's Gazette), August 22, 1974; Army General G. Kulikov, "A Great National Course," Voyennyye Znaniya, No. 5, May 1974, p. 3; N.P. Olovyanishnikov, editor, Grazhdanskaya Oborona (Civil Defense), (Moscow: Vysshaya Shkola, 1979), p. 172.
40. Colonel General A.T. Altunin, "Principal Aspects—Practical Training," Sovetskiy Patriot, November 21, 1973.
41. Colonel General A.T. Altunin, "Our Common Task," Professional'no-Tekhnicheskoye Obrazovaniye (Professional-Technical Education), No. 12, December 1974, pp. 34.35.

Section 3

THE PERVASIVENESS, ORGANIZATION AND CONTENT OF SOVIET CIVIL DEFENSE PUBLIC INSTRUCTION

As was described in the preceding section, the Soviet Union has had a long-standing mandatory civil defense instruction program for the population. Included in the program are school children, students in vocational schools and institutions of higher learning, the working adults, as well as non-employed adults. The implementation of the program involves not only the various levels of the national civil defense organization, but also the Communist Party, the elected councils (Soviets) and their executive committees, the educational system, various economic ministries, trade unions, the Red Cross organization and local medical institutions, and DOSAAF.^{1/}

In order to provide the necessary large numbers of instructors, there exists an extensive network of civil defense schools and courses at various levels—from the national school to schools in the republic, province (oblast), city and rural county (rayon) levels, and at large economic installations. In order to facilitate practical instruction and exercises, there is a network of special training sites or facilities built by the cities, urban districts, rural counties, and large economic installations. The total cost of the construction of these training sites may add up to well over 3 billion dollars at the official rate of exchange of rubles for dollars.^{2/}

The instruction program for the population is based on the principle that the head of any administration, organization, enterprise, or institution, being its chief of civil defense, is also responsible for planning and implementing the instruction of all persons under his control. He may be assisted in this task by a deputy for training and by his chief of the civil defense staff. The content of the instruction program and how it is to be presented is ultimately determined by the national headquarters of USSR Civil Defense and, when necessary,

confirmed by the various ministries or national and republic administrations. In any event, the instruction program and its various courses designed for specific elements of the population are national programs, and their content and the time devoted to them cannot, or at least should not, be altered by lower authorities. Given that the instruction program is mandatory for the population, local officials, councils, managers, etc. cannot refuse to implement it or to actively participate in the civil defense program as a whole. There may be shortcomings in the implementation of the instruction program at local levels, and local officials and managers may fail to carry out the program in the prescribed manner, but if they do so, they are publicly criticized and, in principle, could be punished with the loss of their position.

Aside from the civilian civil defense forces or, as the Soviets call them, "non-militarized formations" to distinguish them from the military civil defense troops, the general population is divided into three groups for civil defense instruction purposes: school children and students, working adults who are not members of the civil defense forces, and non-working adults, i.e., retirees and housewives. Each of these groups has its own mandatory civil defense course or, in the case of school children and students, sets of courses. As was noted, since the 1950s, these courses have undergone changes in length and content. The description of the courses for these three groups of the population given below focuses on the current instruction program.

3.1 THE INSTRUCTION PROGRAM FOR SCHOOL CHILDREN AND STUDENTS AT VOCATIONAL SCHOOLS AND INSTITUTIONS OF HIGHER LEARNING

Primary and secondary education is compulsory in the Soviet Union. School children, however, may either attend ten-year secondary schools or may undergo partial secondary education and then attend vocational schools. Graduates of secondary schools may attend middle-level technical schools or they may attend institutions of higher learning which include universities and various types of specialized institutes.

Actually, more students attend the latter than the universities which specialize in basic science and humanities studies. Regardless of which educational track a Soviet youth pursues, however, he must undergo instruction in civil defense as a part of the curriculum.

3.1.1 Civil Defense Instruction in Secondary Schools

At the present time, formal civil defense instruction in the ten-year schools is given in the 2nd, 5th, and 9th-10th grades. In other words, the instruction is given to students at the average ages of 8, 11, and 15-16. For each grade there is a specific instruction course.

Instruction in the 2nd grade consists of five to eight hours of classroom instruction and five or six 15-20 minute exercise periods.^{3/} The content of the instruction is focused on: teaching the children to recognize three civil defense warning signals, i.e., "Air Raid Alert," "Threat of Radioactive Contamination," and "All Clear" and how to act when hearing these signals; the use of gas masks, respirators or cloth face masks; and to take cover in shelters and how to behave in them.^{4/} One objective of the instruction is to familiarize the children with warnings and the wearing of gas masks, thereby mitigating the childrens' fear of such events. The instruction is carried out by the regular classroom teachers who undergo a special civil defense course for this purpose.

Instruction in the 5th grade consists of 15 hours of classroom instruction given in one-hour classes. The content of the classes include the following topics: the significance of civil defense and the duties of students; the effects of nuclear, chemical, and bacteriological weapons; methods of protection against weapons of mass destruction, i.e., uses of gas masks, blast and fallout shelters, taking cover behind protective terrain features if one is in the open when a nuclear detonation occurs; civil defense warning signals and how to act according to them; and how to administer first aid to oneself and to others and how to

carry injured school children.^{5/} The instruction includes the practicing of wearing gas masks and respirators, demonstration of how to adapt ordinary clothes for protective purposes, and, if possible, visits to shelters. Instructional material includes the use of posters, slides, and films. The instruction may be given by regular teachers or by military instructors assigned to the secondary schools. The military instructors are primarily responsible for conducting the pre-induction military instruction program for students in the 9th and 10th grades, for extra-curricular para-military studies and games conducted at the schools, and for the "military-patriotic education" program carried out throughout the secondary education process.

Over time, the length of civil defense instruction for students in the 9th and 10th grades has repeatedly changed. In 1973, when the current program was launched, students in the 9th grade received 35 hours of civil defense instruction. In 1975 this was reduced to 29 hours in order to allow more time for the study of military subjects.^{6/} However, in 1982 the program was changed again, prescribing 32 hours of instruction to be carried out over two years, i.e., in the 9th and 10th grades.^{7/} The present instruction course covers eleven subjects, six of which are given in the 9th grade and five in the 10th grade.^{8/} The subjects studied in the 9th grade include:

- "Civil Defense at an Installation of the National Economy (Educational Institution)"
- "Characteristics of Weapons of Mass Destruction of Foreign Armies"
- "Methods of Individual Protection," i.e., the use of gas masks and chemical defense clothes
- "Methods of Collective Protection," i.e., blast and fallout shelters
- "Rescue Work in Centers of Nuclear Destruction"
- "Civil Defense Warning Signals, Rules of Behavior and Actions of People in Zones of Radioactive and Chemical Contamination and in Centers of Bacteriological Infection."^{9/}

The subjects covered in the 10th grade include:

- "Evacuation and Dispersal of the Urban Population" (students in rural areas study the reception of urban evacuees)
- "Decontamination of Persons, Their Clothing, Shoes, Weapons and Equipment"
- "Instruments of Radiological and Chemical Reconnaissance and Dosimetric Control"
- "Radiation and Chemical Observation [Monitoring] Posts"
- "Actions of the Population in Areas of Natural Disasters."^{10/}

In rural areas, students study how to protect live stock, water sources, and food and fodder stocks.

The instruction is given by the military instructors. It combines classroom lectures and demonstrations with practical training and exercises. This includes the wearing of gas masks; visits to shelters; the construction of simple fallout shelters; first aid and how to carry injured persons; and the use of individual medication kits, dressing packets, and decontamination packets. For example, three hours are devoted to the study of dosimeters, radiation meters, and chemical detection kits and their uses, and three hours to how to conduct radiation monitoring and observation of nuclear detonations from observation posts.^{11/} In lieu of study of various military subjects, the girls are given additional instruction in first aid and the care of the sick and injured in order to prepare them for subsequent service in Volunteer First Aid Squads (Sanitarnyy Druzhiny) which are a major element of the Soviet Civil Defense Medical Service.^{12/} These squads will participate in rescue operations in areas of peacetime disasters and of nuclear destruction, and work in the civil defense field and base hospitals. Naturally, the civil defense instruction program is also used for political indoctrination purposes. It includes discussion of the aggressive

intentions of the West and of the United States in particular and the danger this poses to the Soviet Union, along with discussion of the peace and disarmament aspirations of the Soviet Union. There is also discussion of the "heroic" deeds of civil defense personnel during World War II and in various natural disasters which the students are told to emulate.^{13/}

At the end of the course, examinations are held to determine the students' knowledge and skills. The examination requires the students to pass 21 "norms" in the various subjects. It is asserted that the standards of knowledge and proficiency the students are required to meet "all approximate the Army requirements."^{14/} For example, a student is given an "excellent" rating if he can put on a gas mask in eight seconds, a "good" rating if he does it in nine seconds, and a "satisfactory" rating if he does it in ten seconds.^{15/} It should be noted that the secondary schools—and this is also the case for vocational schools and institutions of higher learning—organize their own civil defense units. These usually include a rescue unit, first aid units, and a public order and safety team, and may also include radiation and chemical monitoring posts.^{16/}

As was noted, school children receive additional civil defense instruction while attending Pioneer summer camps,^{17/} and while participating in the national para-military sports games "Zarnitsa" (Dawn) for children in the 5th to 8th grades, and "Orlenok" (Eaglet) for those in the 9th and 10th grades. According to Soviet reports, some 20 million school children participate annually in these games. The games not only include such subjects as rifle marksmanship, grenade throwing, crossing of minefields and contaminated areas, cross-country marches, small unit tactics, and radio communications, but also rescue, first aid, radiological reconnaissance, construction of fallout shelters, and so on.^{18/} In addition, school children participate on a voluntary basis in various para-military study circles. For example, it is said that in addition to some 2 million 5th grade students studying first aid, some 1.5 million 6th, 7th, and 8th grade students study first aid in "medical-hygiene circles."^{19/}

3.1.2 Instruction in Vocational and Middle-Level Technical Schools

Students in vocational schools must undergo the same pre-conscription military instruction program as those in the secondary schools, including some 32 hours of instruction in civil defense.^{20/} There appear to be some differences, however, depending on whether the vocational program is of two or more years duration or shorter. Thus, in the first case, 11 hours are allocated to the study of "Means of Protection Against Weapons of Mass Destruction," while in the latter schools, only seven hours are allocated to this subject. Again, "middle-level special educational institutions" devote 10 hours to it.^{21/}

In the vocational and especially the middle-level technical schools, an effort is made to combine basic civil defense instruction with specialized instruction according to the students' fields of study. For example, students in a railroad institute may spend up to 20-25 hours of additional study on civil defense problems relating to the railroads and on various special projects such as how to adapt railroad tunnels for use as shelters, or how to adapt various construction and agricultural mechanized equipment for rescue, firefighting or decontamination work.^{22/} In middle-level medical and pharmacological institutes, the students receive at least 12 hours of instruction in medical civil defense subjects.^{23/} Of course, it is assumed that the graduates of the vocational and technical schools will later serve in the civil defense forces and become commanders of various civil defense teams and detachments at their places of work.^{24/}

3.1.3 Instruction in Institutions of Higher Learning

All physically fit male students in institutions of higher learning undergo a military instruction program taught by a military department of the faculty. In most cases, this program is equivalent to the ROTC program in the United States, the graduates being commissioned as officers in the reserve. In the Soviet Union this program also includes mandatory instruction in civil defense. In the case of

female students, instead of various military subjects, they receive additional instruction in medical civil defense. Civil defense instruction at institutions of higher learning usually consists of a basic 16-26 hour course and of additional instruction in accordance with the students' fields of study.^{25/} In most cases, at least 40-50 hours of instruction are devoted to civil defense subjects.^{26/} The basic portion of the course deals with such subjects as: "Weapons of Mass Destruction and Their Effects," "Protection of the Population Against Weapons of Mass Destruction," "Organization of Civil Defense at Economic Installations," "Radiation and Chemical Reconnaissance and Radiation Control," "How to Assess Radiation Data and Levels of Contamination," "Methods of Civil Defense Instruction of the Population," "Post-Attack Rescue and Repair Operations," and "Actions in Areas of Natural Disasters." Apparently up to 26 hours of instruction may be devoted to this portion of the instruction program, including ten hours of lectures, six hours of seminars, and ten hours of practical training. The second section of the program, of up to 24 hours of instruction, is devoted to the study of civil defense subjects in one of 17 civil defense specialties according to the students' fields of study. For example, medical students receive basic instruction in civil defense and then study such subjects as: the organization of the Civil Defense Medical Service and its mission; the tactics of civil defense medical units in areas of natural disasters, nuclear destruction, and chemical or bacteriological contamination; medical assistance to the population during its evacuation; operations of First Medical Assistance Detachments (OPMs); post-attack hygiene and epidemic control measures; casualty triage procedures, etc.^{27/} The training may include practice in the deployment of a First Medical Assistance Detachment—a type of field hospital for the initial reception, triage, and treatment of casualties in the areas of nuclear destruction.^{28/} The civil defense instruction program for most students in institutions of higher learning aims at preparing them for command responsibilities in the civil defense forces or for working in their specialties in the various services of USSR Civil Defense.

Students in humanities study programs are not believed to be in fields relevant to defense. Consequently, they receive some 40 hours of civil defense instruction, of which 24 hours are devoted to training in first aid and in the care of patients in order to prepare them for service in the First Aid Squads of the Civil Defense Medical Service.^{29/}

3.2 THE INSTRUCTION PROGRAM FOR WORKING ADULTS

Between 1973 and 1983, Soviet working adults who were not members of the civil defense forces received annually 20 hours of civil defense instruction according to the "Program of Universal Mandatory Minimum Knowledge of Protection Against Weapons of Mass Destruction."^{30/} In addition, the workers, employees, and collective farm workers, and sometimes their families as well, participated in comprehensive exercises held at their place of work or by cities, city districts, or counties where they reside.

The content of the 20-hour instruction program was very similar to that of the preceding 21-hour program. The objective was to teach the working adults: the use of shelters and how to build simple fallout shelters or adapt basements, cellars, and other underground structures for use as shelters; the use of gas masks and chemical defense suits, and how to make simple cloth masks and adapt ordinary clothing for protective purposes; to recognize the various civil defense warning signals and to act correctly in response to them; evacuation procedures; how to act in areas of radioactive and chemical contamination; how to give first aid; simple methods for decontaminating skin surfaces, clothing, and shoes; "The Duty of Adults and the Specific Aspects of the Organization of the Protection of Children Against Weapons of Mass Destruction;" and how to act in the event of natural disasters, i.e., floods, earthquakes, and hurricanes.

At the work places, instruction was and continues to be implemented on the principle of "superiors instructing their subordinates." In practice, this means that the instructors are the shop, department,

or section chiefs; foremen of workshifts; senior managers; and persons from the engineering and technical staffs, health service, and so on, assigned to serve as instructors. To prepare them for their duty as instructors, they are required to attend special civil defense courses given at the local civil defense schools or at the enterprises themselves. Instruction in first aid is usually given by medical personnel from the enterprises' own health service or by Red Cross instructors or physicians from medical institutions. Instruction is carried out in accordance with plans and schedules prepared in advance by the managers of the work places and their civil defense staff.

The trainees participate in the instruction in their free time. Classes are usually made up of some 15 to 30 persons, and at larger enterprises or organizations, they are held in special civil defense classrooms or in shelters used as classrooms. The instruction method combines lectures and discussions with demonstrations, the use of various visual aids, and practical instruction in the classroom, shelter, and, if necessary, at special civil defense training sites.^{31/}

The stated objective of the 20-hour instruction program was to instill in the working adults practical knowledge and the necessary skills to ensure that they would take effective actions for their protection in the event of an enemy attack and "actively" assist in the implementation of civil defense measures. At the end of each year's instruction course, the trainees were required to demonstrate their knowledge and proficiency by passing several "norms," i.e., test questions or test demonstrations in each of the subjects taught in the course. The repetitiveness of the yearly instruction presumably ensured that the trainees would in fact acquire the necessary knowledge and skills, but this also inevitably generated boredom. Furthermore, despite the insistence on practical instruction, much of the classroom work remained limited to lectures in theory.

A major change in the instruction program was announced in December 1982. The "New Program for the Civil Defense Training of

Workers, Employees, and Collective Farmers" consists of a three-year program, with 20 hours of mandatory instruction per year. The new program not only emphasizes practical training, but also adds new subjects for study and is designed to achieve greater in-depth treatment of each subject than hitherto. Instruction in each of the succeeding years will build on and add to the trainees' knowledge acquired in preceding instruction classes. Thus, according to a radio talk by a civil defense official,

Whereas in the past classroom sessions, lectures, and similar forms of training were predominant, now it is essential that practical training in methods and actions to be taken in defense against weapons of mass destruction and in carrying out rescue work should take first place in every class and training session.^{32/}

It is hoped that at the end of the three-year instruction cycle all working adults will "know the material of the entire program" and will be able to carry out all prescribed actions according to "standards of civil defense."^{33/} In order to implement the program, all civil defense instructors have been undergoing a new three-year training program of 35 hours of instruction per year at civil defense schools.^{34/}

Between December 1983 and June 1984, only the details of the instruction courses for the first two years of the program have been published. Publication of the subjects to be covered in the third year course will probably take place in the fall of 1984.

The following is a description of the first and second year instruction program.

3.2.1 First Year Instruction

- First Subject: "Tasks and Duties of the Population;" length of instruction, one hour.^{35/} The instructor discusses primarily three topics: What the Party leadership has to say about the "aggressive character of imperialism and the necessity to strengthen the defense

might of the Soviet Union;" the role and functions of civil defense in the general system of defense measures; and the "fundamental duties of the population in carrying out civil defense measures." The role and functions of civil defense include first, the protection of the population against nuclear, chemical, bacteriological, and conventional weapons. This, it is emphasized, demonstrates the "humanitarian" objective of Soviet civil defense. Protective measures include sheltering, evacuation, and use of individual means of protection (i.e., gas masks and protective clothes). The second mission of civil defense is the protection of the economy and ensuring essential production in wartime. The third mission is the carrying out of post-strike rescue, damage limiting, emergency repair and restoration operations in areas of nuclear damage, chemical or bacteriological contamination, and in the event of peacetime natural disasters and large industrial accidents.^{36/} The general population may be mobilized to participate in these post-strike operations. It is the duty of the population to acquire the necessary civil defense knowledge and skills, to correctly and rapidly carry out appropriate actions in an emergency, to strictly obey instructions, and to "actively participate" in the implementation of civil defense measures.

- Second Subject: "Nuclear Weapons and Methods of Protection Against Them," length of instruction, two hours.^{37/} The instructor describes the characteristics of nuclear weapons and the various effects of their detonation. One objective of this lesson is to explain that protection against these effects (i.e., blast, thermal radiation, prompt and fallout radiation, flying debris, fires, etc.) is possible.

- Third Subject: "Special Characteristics of Protection Against Toxic Agents," length of instruction, two hours.^{38/} The instructor deals with the characteristics and effects of various types of chemical weapons including nerve gases (V-gases, Sarin, Soman), psycho-chemical agents, blistering and irritating agents, etc., and methods of protection against them. Mention is also made of decontamination methods and of rules of behavior in contaminated areas.

- Fourth Subject: "Bacteriological (Biological) Weapons of the Enemy and Principles of Protection Against Them," length of instruction, one hour.^{39/} The instructor warns that the United States is developing bacteriological weapons and cites instances of alleged use of these weapons in Cuba in 1980 and in Afghanistan. This is followed by a brief discussion of a variety of bacteriological agents allegedly being developed in the West. The instructor then describes various means and methods of protection against such agents, which may be spread by aerosols, insects, etc. It is noted that infectious diseases pose special dangers to people and livestock. Mention is made of use of medications and vaccines, special hygienic procedures, and rules of behavior in quarantined areas.

- Fifth Subject: "Fragmentative, Explosive, Incendiary and Other Enemy Means of Destruction and Protection Against Them," length of instruction, one hour.^{40/} This is a new subject. It is argued that in addition to "weapons of mass destruction," the United States and NATO are also improving conventional weapons which are very destructive. It is implied that such weapons may be used against targets on the territory of the Soviet Union. In the course of the instruction, mention is made of a variety of new types of Western aerial explosive bombs, cassette munitions, aircraft and missile delivered mines, new incendiary bombs, and so on. It is explained that protection against such weapons includes the use of shielding terrain features and shelters and various fire prevention measures. The population should also be prepared to fight fires and give first aid to casualties.

- Sixth Subject: "Blast Shelters and Fallout Shelters—Reliable Means of Collective Protection," length of instruction, three hours.^{41/} The instructor should explain "that only in the zone of total destruction is it possible that a few shelters will sustain damage," and that this zone "will comprise only a small part of the area of destruction." It is pointed out that the effectiveness of fallout shelters in rural areas will depend on the thickness of earth used to shield the

occupants. The first hour of instruction is used to discuss various types of shelters, their characteristics, and equipment. The second lesson of one hour's duration is devoted to a detailed discussion on how to adapt ordinary basements and cellars for use as shelters and how to build and equip simple fallout shelters. The third hour should be spent at a civil defense training site, during which the group of trainees builds or at least initiates the construction of a covered trench or dugout to be used as a fallout shelter. It is suggested that the group of trainees be divided into three teams, the first to trace the shelter on the ground and excavate it, the second to prepare the roofing materials, while the third will make and install doors, ventilation ducts, and benches for seating. The instruction also includes discussion of the rules of operation of the ventilation systems, length of possible shelter stay, and rules of behavior when leaving shelters.

- Seventh Subject: "Means of Protection of Respiratory Organs," length of instruction, one hour.^{42/} Presumably, because so much time was spent on this subject during the previous instruction programs, its treatment in the new program has been shortened to one hour. The instruction consists of a demonstration of the correct selection of the size of gas masks for various individuals, their use, as well as the use of respirators and simple cloth face masks. Presumably, all trainees will practice the wearing of all three types of protective devices. The instructor also explains the rules for storage of gas masks and respirators, how to test them, and how to decontaminate masks after their use in areas contaminated by radioactive fallout or chemical agents.

- Eighth Subject: "Protection of the Population by Means of Dispersal and Evacuation," length of instruction, one hour.^{43/} The subject of this lesson is treated differently in the case of instruction of urban and rural inhabitants. In the case of urban residents, the main focus is on the study of warning procedures and methods of announcing the evacuation, preparation of the population for departure (i.e., what it

should take along and what it should do to secure its residences), rules of behavior on the routes of march of those who leave on foot in organized groups, and operations of the urban Evacuation Assembly Points (SEPs) to which each evacuee must report.^{44/} Rural inhabitants are instructed in the preparation and procedures for the reception of urban evacuees, their housing, the provision of fallout shelters for the evacuees, and the setting up of medical and other essential services and supplies for them. It is emphasized that the dispersal and evacuation of urban residents is "one of the important methods of protection of the population." It is suggested that the instruction of urban residents be conducted at the Evacuation Assembly Points to familiarize them with their locations and procedures. In the course of the lesson it is explained which element of the evacuees will be provided with means of transportation and which will leave the cities on foot. Of course, it is made very clear that all evacuation will be carried out in an organized manner by places of employment or, for non-working adults, by places of residence, that unsanctioned self-evacuation is strictly prohibited, and that each head of household and his family will have to proceed to a specifically assigned hosting locality.

- Ninth Subject: "Civil Defense Warning Signals, What They Mean, and How to Act in Response to Them," length of instruction, two hours.^{45/} This lesson can be given in a single two-hour session or in two one-hour sessions. The lesson deals with the actions of the population in response to civil defense warning signals, i.e., "Air Raid Alert," "All Clear," "Threat of Radioactive Fallout," and "Threat of Chemical Contamination." Each type of warning is associated with sets of recommended actions by the population depending on whether people are near shelters, in the fields, and so on. The instructor should devote most of the class time to "rehearsing the practical activities associated with the signals," and, therefore, may conduct the class at a civil defense training site if one is available. The lesson also involves the trainees putting on gas masks and other protective gear in response to various warning signals.

• Tenth Subject: "Giving Medical Self-Help and Mutual Help for Wounds, Fractures and Burns," length of instruction, four hours.^{46/} The subject is studied in two "practical lessons" of two hours each. The objective of the instruction is to teach the trainees to practice medical self-help and give first aid to others. This includes stopping bleeding, bandaging wounds and burns, immobilizing broken bones, giving artificial respiration and indirect heart massage, and the carrying of injured persons. The first session is devoted to methods of stopping bleeding, including the use of tourniquets, and of bandaging various wounds, burns, and fractures. The second session deals with actions to be taken in the case of persons injured by burning napalm and white phosphorus or suffering from frostbite; first aid to persons in shock; methods of administration of artificial respiration and indirect heart massage; aid to persons suffering from heat prostration or sun stroke; and how to carry persons with various types of injuries. The various first aid methods are demonstrated by the instructors on selected participants and then practiced by the trainees on each other. It is noted, however, that during the entire three-year program, a total of 12 hours will be devoted to instruction in first aid and the care of the sick.^{47/}

• Final Class: "A Test For Everyone."^{48/} Apparently, this final class will devote up to three hours to the testing of the trainees. The trainees are required to show proficiency in the use of shelters, gas masks, giving first aid, responding to civil defense warning signals, and so on. The test includes answering examination questions as well as individual and group demonstrations of skills. The examination may be observed by a commission made up of representatives of the local civil defense staff, the Red Cross, the management of the enterprises or farms, the Party organization, and so on. Trainees who fail to satisfy the norms will have to repeat the test.

3.2.2 Second Year Instruction

The second year of the three-year instruction program also deals with ten study subjects and ends with an examination session, for a total of 20 hours of instruction. Unfortunately, in most instances the published materials do not indicate the length of instruction time allocated to each study subject. The following are the announced study subjects for the second year of the civil defense instruction program for working adults not serving in civil defense units. The numbering of the subjects is continued in Soviet publications from those given in the first instruction year.

- Eleventh Subject: "Civil Defense at Installations of the National Economy. The Role of Workers, Employees and Collective Farmers in Raising the Level of Stability of Their Installations."^{49/} By "stability" is meant the survivability of an installation or facility and its ability to function in wartime. It is said that there is a close connection between this subject and the first subject. The eleventh subject includes discussion of the following topics: "The CPSU and the Soviet Government's Concern for Strengthening the Nation's Defense Capability and Improving Civil Defense," "Civil Defense of an Installation and Its Main Tasks," and "The Concept of Stability of Work and the Principal Measures Aimed at the Solution of this Problem at One's Own Installation." The first topic describes the alleged threat posed by U.S. defense policies and programs and the Soviet Union's need to counter this threat. The second topic deals with the need for and organization of civil defense at economic installations in general and specifically at the trainees' places of employment. Discussion of the third topic deals with measures taken to protect the duty workshift at the installation; the protection of workers manning assemblies, machines or production lines which cannot shut down; the strengthening of structures; the burying of power, fuel, gas and other lines; organization of production control in wartime; preparation for restoration of damage; and so on.

- Twelfth Subject: "Specifics of Protecting Children."^{50/}

This topic is treated in a "practical" lesson for the purpose of "teaching the adult population how to fulfill their duties of protecting children against weapons of mass destruction." The instruction includes the showing of slides and films. Included in the instruction are demonstrations of children's gas masks, respirators, and cotton or gauze masks; how to put them on young children; and the use of portable chemical defense chambers for infants. The instructor also discusses what to do for children during evacuation; how to prepare their clothing and food, and provide them with identification tags; how to build fallout shelters suitable for the use of children of evacuated children's institutions. Adults are also responsible for ensuring that in the event of an alert, the children are immediately taken to the shelters.

- Thirteenth Subject: "Protection of Food, Fodder, and Water."^{51/}

The topics covered in this lesson include: "Protection of Food and Water at Home," "Places and Methods of Storage of Food in Rural Areas," "Protection of Fodder and Livestock Feed in the Field and on the Farm," and "Protection of Water Sources." The trainees are taught various methods of protecting food and water at home, in storage facilities, and in the open against contamination by fallout and chemical agents. The methods include the wrapping of food and protected storage of water, the sealing of storage facilities against the penetration of fallout and toxic gases, the covering of haystacks and fodder, the protection of water wells, and so on.

- Fourteenth Subject: "Protection Measures for the Home (Apartment)."^{52/} The topics covered in this lesson include: "Preparation for the Timely Reception of Civil Defense Commands, Orders and Signals," "Fire Prevention Measures in the Home (Apartment)," and "Strengthening the Protective Properties of Residential Space and Basements." The first topic deals mainly with teaching the trainees to set their radios and television sets to appropriate stations which will broadcast civil defense information and warnings, and to be prepared to recognize such information

and warnings when transmitted by public address systems, factory whistles, etc. In discussing the second topic, the instructor notes that the detonations of U.S. warheads on Pershing 2 missiles, cruise missiles, and submarine-launched missiles "may cause fires at a distance of 5-6 kilometers from the point of detonation." Fires may also result from secondary effects of nuclear detonations. Measures recommended to reduce the fire hazard in the homes include: removing curtains and blinds from windows; placing wooden or other shields, painted white or with fire resistant mixtures, over the windows; moving furniture out of the line of sight through the windows; placing clothing, shoes, books, and other highly flammable things in closets or packing them in suitcases; disassembling wooden sheds and fences in close proximity to the house; maintaining a reserve of water and sand for firefighting and keeping shovels, axes, fire extinguishers, hoses, etc. in readiness; and when leaving home, shut off all electricity and gas, and extinguish all fires. The third topic deals with reinforcing basements and their doors, sealing basement windows, banking earth against outside walls, placing sand on the attic floor, sealing all cracks and openings in the walls which may allow the penetration of radioactive dust inside the home; preparing suitable interior rooms for use as shelters; and so on.

• Fifteenth Subject: "Blackout of Residential and Production Buildings."^{53/} The concern of Soviet civil defense with blackout has changed several times. At one time it was omitted from the instruction program but then was reinstated on the ground that there remained a persistent threat of attack by enemy bombers. The lesson discusses a number of topics: "Blackout and Its Significance in Present Conditions," "Regimes of Complete and Partial Blackout," "The Sealing of Windows and Requirements for Light," "Blackout Measures on Means of Transportation," and "Light Signals [Signs]." One should note that the use of paper or artificial fiber blackout curtains or shades—which are recommended in the instruction for use in residential places—appears to contradict the suggested fire prevention measures. Of course, the wooden

or metal shields recommended for windows as a fire prevention measure could also serve for blackout purposes, but would prevent ventilation.

• Sixteenth Subject: "Individual Means of Medical Protection."^{54/} The objective of this lesson is to teach the use of individual medical kits and decontamination packets. The topics discussed in this lesson include: "How Individual Means of Medical Protection are Issued and Stored," "Medical Dressing Packets," "Individual Medication Kits (AI-2)," and "Individual Anti-Chemical Packets (IPP-8)." The instruction includes demonstrations of the use of the various packets and kits, as well as the showing of slides, films, and training posters. The published instruction does not specify how and when these medical supplies will be issued to the population. This will depend on the specific conditions at the places of employment and, consequently, each instructor is supposed to inform the trainees accordingly. Concerning the medical dressing packets, the Soviet industry produces four different types of such packets. Because it is not known which type will be issued to given individuals in an emergency, the trainees must familiarize themselves with the use of each of them. The individual medication kit (AI-2) is supposed to be issued in an emergency to members of the civil defense forces and the general public. It is a small, compact box which contains a syrette with a pain-killer; two types of "anti-radiation" tablets in three containers; a container of anti-nausea tablets; a container of antibiotic tablets; and a container of pills for treating persons exposed to toxic chemicals.^{55/} Each pillbox is of a different shape, and all are color-coded for ease of identification. The kits used in training do not contain the syrette, which probably holds morphine. The individual anti-chemical packet (IPP-8) is made up of a single plastic packet containing a bottle of decontaminant liquid and a number of gauze pads used to wipe off radioactive dust, toxic liquids, or liquid bacteriological agents from skin surfaces.

● Seventeenth Subject: "Means of Skin Protection."^{56/} This subject deals with the character and uses of chemical defense suits. Two hours are assigned to the study of this subject. There are several types of such suits intended to protect the wearer against skin contact with radioactive dust and toxic chemicals. These suits are reported to be available to civil defense personnel and to essential workers who will continue to work in critical industries in time of war.

● Eighteenth Subject: "Actions of the Population in Centers of Nuclear Destruction and When Participating in Rescue Work."^{57/} It is noted that two hours are devoted to this subject and that practical training should be conducted at civil defense training sites or in the territory of the enterprise where the trainees are employed. This subject includes study of the following topics: "Rules of Behavior and Actions by the Population in Centers of Nuclear Destruction," "Participation of the Population in Rescue Work," "Special Characteristics of Rescue Work in Conditions of Radioactive Contamination at Night, in Winter, and in the Hot Season of the Year," and "How to Exit from Centers of Nuclear Destruction and Safety Measures." It is noted that if a shelter has sustained damage, its occupants may be forced to leave it and seek to reach a safer place according to the orders of the shelter commander. If the shelter exits are blocked, the occupants will try to clear one of them. Persons who find themselves in the open at the moment of a nuclear detonation must seek the nearest best available cover from the blast wave and thermal radiation, put on their gas masks, and then find cover against fallout. When participating in rescue operations—which are normally conducted by trained civil defense forces, the population may have to fight fires, clear rubble from ventilation air intakes and exits of shelters, rescue persons from upper floors of damaged or burning buildings, and also administer first aid to casualties and help carry them to safety. In the time allocated to this subject, the trainees are not required to practice all of the rescue techniques, but they are given hypothetical situations and asked what courses of action they would take that would be most appropriate to

them. The other topics discuss individual protective and prophylactic measures to be carried out in contaminated areas, duration of work in protective suits, illumination of work sites at night, and safety rules while leaving areas of nuclear destruction.

- Nineteenth Subject: "Actions of the Population in Zones of Radioactive Contamination. Methods of Anti-Radiation Protection."^{58/} This subject is said to be essentially a continuation of the second subject, "Nuclear Weapons and Methods of Protection Against Them," studied in the preceding year. The study subject includes the following topics: "Characteristics of a Zone of Radioactive Contamination," "Methods of Action and Rules of Behavior of People in Zones of Radioactive Contamination," "Methods of Anti-Radiation Protection," "Rules for Eating in Zones of Radioactive Contamination," and "Evacuation of the Population." The lesson consists primarily of discussion by the instructor, with the help of visual aids, of the character and possible dimensions of fallout zones and possible levels of radiation in them. Further, the instructor discusses the radiation protection factor provided by various types of fallout shelters and simple anti-radiation covers, the amount of permissible whole-body doses of exposure to radiation in a short period of time, and the amount of time people can be in the open depending on existing levels of radiation.

- Twentieth Subject: "Medical Self-Help and Mutual Aid in the Event of Injuries from Radioactive and Toxic Materials and Bacteriological Agents."^{59/} Three study hours are devoted to this subject, organized into two lessons. The first one-hour lesson is devoted to the discussion of measures to be taken "to prevent the further harmful effects of radioactive or toxic materials on injured persons" and of what is meant by "radiation sickness" and prophylactic measures against it. The second session is devoted to questions of first aid to the victims of radiation and toxic materials and how to act in areas of bacteriological contamination. The main objective of these lessons is to further reinforce in the trainees the knowledge and skills acquired in previous training

sessions dealing with first aid; effects of nuclear, chemical and bacteriological weapons; uses of dosimeters and radiation meters; behavior in contaminated areas; and so on. Actually, trained civil defense personnel will be responsible for radiation monitoring.

- Final Examination concluding the second year of instruction.^{60/} The trainees are rated individually and as a class. It is suggested that "in order to increase the peoples' interest and raise the level of preparation for the final examination," competitions be organized between shops, departments, sections, etc. at the work places. Three hours are allocated to the examination which includes answers to questions as well as demonstrations of skills by individuals and teams of trainees. Presumably those who fail the examination will have to take it again.

3.2.3 Third Year Instruction

As was noted, the content of the third year of instruction in the current civil defense instruction program has not yet been announced. Like the preceding two years, it should provide for 20 hours of instruction ending with an examination of the trainees. In principle, it will further emphasize practical training and skills. Materials published so far indicate that the third year program may include such subjects as security at economic enterprises, rescue work in areas subjected to combined nuclear and chemical attack, measures to liquidate damage at economic installations, more instruction in medical first aid and shelter construction, and so on. According to the basic concept of the instruction program, each succeeding year of instruction is intended to build on and further expand the trainees' knowledge and skills in all basic civil defense subjects and prepare people to take appropriate action in any emergency situation.

Although the new three-year instruction program emphasizes practical training and indeed the trainees will receive more of it and will be required to demonstrate their skills, it nevertheless appears that a good deal of the instruction is still limited to lectures, the

showing of slides and films, and demonstrations of equipment by the instructors. Given the time limits devoted to the instruction of some topics, it is difficult to see how much real practical experience the trainees will actually acquire. For example, only one hour is devoted to instruction in the construction of simple fallout shelters. Even if this instruction is given at civil defense training sites, it is doubtful that the trainees will gain much practice in this subject in such a short time. Similarly, little practical experience will be gained from the lessons in rescue work.

3.3 THE INSTRUCTION PROGRAM FOR NON-WORKING ADULTS

Non-working adults are instructed in classes held at places of residence. The instruction is organized by the local civil defense staff or the staff of enterprises which own given residential buildings, the housing administrations, DOSAAF and Red Cross, The Young Communist League (Komsomol), trade union organizations, and local Party organizations. One reason for the number of organizations which may be involved in this instruction program is the difficulty of organizing such instruction and of finding sufficient instructors for this purpose.

At present the retirees and housewives are instructed according to a 12-hour instruction program which was initiated in 1978.^{61/} Earlier attempts to have this group undergo the basic 20-hour program proved too difficult to implement. It was found that lessons had to be short so as not to tire the elderly participants and so as not to take residents away from their household duties too long.^{62/}

The lessons are usually only one hour long and are given to groups of 10 to 12 persons. The subjects covered include: the use of gas masks and how to make simple cloth face masks; the use of shelters; protection of food and water in the residences and sealing them against radioactive dust; how to blackout residences; how to prepare for and participate in an evacuation; first aid; protection of children; and actions to be taken when hearing civil defense warning signals.^{63/}

Particular note is taken of the fact that in a majority of cases young children are left in the charge of elderly relatives while both parents work and, consequently, that it is especially important to instruct the non-working adults in civil defense measures for the protection of children. As much as possible, this group is taught practical skills. The use of equipment is both demonstrated and practiced, the trainees visit nearby shelters or fallout shelters, practice first aid, and so on. The instructors also use slides and films for instruction purposes. In addition, non-working adults are expected to study on their own the basic instruction pamphlet Everyone Must Know and Be Able To Do This.^{64/} This illustrated pamphlet deals with all the subjects taught in the earlier 20-hour instruction course. The non-working adults are also encouraged to attend special public lectures and the showing of films on civil defense subjects. They may also listen to radio and television programs devoted to civil defense questions.^{65/}

3.4 OTHER FORMS OF CIVIL DEFENSE INSTRUCTION OF THE POPULATION

Paralleling the mandatory civil defense instruction program, there is an extensive public civil defense propaganda campaign. This campaign makes use of all means of public communication: books and pamphlets, newspapers, posters, radio and television, films, public lectures, exhibits, demonstrations, and competitions. In a large measure, it is a part of the "military-patriotic education" program conducted for the population, which is intended to instill in it patriotism, loyalty to the Communist Party, support for Soviet defense programs and "love" for the Soviet Union's Armed Forces, readiness to strengthen the country's defense capabilities and to defend it "weapon in hand," as well as high morale and psychological steadfastness to bear the hardships of a modern war. It is pointed out that,

Civil defense information is an essential part of the military-patriotic education of the Soviet people. Civil defense measures play an important role in the preparation of the population for defense from weapons of mass destruction and in the psychological toughening of the people.^{66/}

The propaganda effort involves the Communist Party organization, USSR Civil Defense, DOSAAF, and the All-Union "Znaniye" (Knowledge) Society, which organizes public lectures and provides lecturers. In the case of USSR Civil Defense, the effort is led at the national level by a Colonel General who is the Deputy Chief of USSR Civil Defense for Political Affairs and by a Civil Defense Propaganda Department headed by a Major General. At republic, province, city, and county levels, the chiefs of civil defense also have deputies for political affairs and propaganda departments or sections.

The propaganda seeks to enhance public interest in civil defense and justify the need for it. At the same time, it serves to provide information on various civil defense subjects, to answer the population's questions concerning them, and reinforces the instructions the population receives in civil defense courses. For example, according to an article,

The main aim radio broadcasts pursue in the field of civil defense is to convince the citizens of the necessity for and the effectiveness of civil defense measures, impel each one of them to practical mastery of skills and methods for protection against weapons of mass destruction, facilitate the morale-political and psychological tempering of the Soviet people, and develop in them the desire to conscientiously perform their duty to protect the socialist Fatherland as required by our Fundamental Law [i.e., Constitution].^{67/}

The same is pursued by all other forms of civil defense propaganda in other media.

The Soviet Union has published and continues to publish numerous pamphlets and books on civil defense, as well as sets of posters for training and propaganda. These publications are available in bookstores and in public libraries. Articles on civil defense are published in national, republican, and local newspapers and journals.^{68/} For example, it has been claimed that in one year the newspapers of the Belorussian Republic carried 1,200 articles on civil defense.^{69/}

Factory newspapers and factory wall bulletins are said to regularly carry articles on civil defense.^{70/} According to the chief of the USSR Civil Defense Propaganda Department, "At many national economic installations, large-circulation newspapers play an important role in publicizing the experience of outstanding members and in the elimination of deficiencies in the performance of civil defense tasks."^{71/} It is noted that efforts are made to have newsmen attend civil defense courses in order to ensure that they can more effectively assess the civil defense activities they report.^{72/} Furthermore, the propaganda articles are usually prepared in cooperation with the civil defense staffs at the various levels.

Radio and television broadcasts on civil defense subjects are provided at the national—and especially at the republic, province, city and county—levels.^{73/} The national journal, Military Knowledge, regularly publishes articles on civil defense subjects especially designed "for local broadcasting." For example, in 1973, the Ukrainian Republic and regional television stations were said to have broadcast more than 460 programs devoted to civil defense.^{74/} Frequently the broadcasts include talks by republic, province or city chiefs of civil defense, their chiefs of civil defense staffs, or other high-ranking civil defense officials.

An important role in civil defense propaganda is played by the "Znaniye" Society, which has over 2.5 million members including a large number of members of the Academy of Sciences of the USSR and the academies of the republics. As a part of its activities, the Society organizes public lectures on civil defense and has established special civil defense sections in the republics, provinces, cities, etc., whose members are specifically assigned to lecture on civil defense subjects.^{75/} According to Soviet press reports, a large number of such lectures are given every year. Along with the lectures, films on civil defense and related topics are shown at these public meetings. The lectures are given in local and factory clubhouses, school auditoriums, libraries,

in motion picture theaters, and so on. A growing number of films on civil defense are available for public showing, and there is also a great deal of amateur movies shown which were taken during civil defense exercises at the plants, farms, schools, etc.^{76/} It was reported that in 1976, over 550,000 persons watched films on civil defense in the Estonian Republic.^{77/} In 1982, more than 40 films were shown to some 60,000 viewers in the Leningrad oblast.^{78/}

Another form of civil defense propaganda is the holding of exhibits and the organization of "civil defense museums." Automobile clubs organize traveling exhibits to the rural areas.^{79/} Public exhibits are often organized in connection with "Civil Defense Month" at large enterprises, in city districts, cities, counties, and republics. One purpose of the so-called civil defense museums is to glorify the accomplishments of the Soviet civil defense forces during World War II and in various national disasters as examples for others to emulate.

Other propaganda activities include parades by uniformed elements of local civil defense forces and the holding of competitions by students and civil defense teams which serve the purpose of testing the skills of the teams, as well as enticing interest in those who watch.

Section 3

FOOTNOTES

1. For the role of the local councils (Soviets), see V.G. Strekozov, Oboronnaya Rabota Mestnykh Sovetov (Defense Work by Local Soviets), (Moscow: Yuridicheskaya Literatura, 1981), pp. 54-58.
2. L. Goure, War Survival in Soviet Strategy: USSR Civil Defense, (Washington, D.C.: Advanced International Studies Institute, 1976), pp. 198-200.
3. M. Shamilova, "Now it is a Regular Subject," Voyennyye Znaniya (Military Knowledge), No. 1, January 1974, pp. 33-34; Radio Tallin, March 22, 1974.
4. P.T. Egorov, I.A. Shylakhov, N.I. Alabin, Grazhdanskaya Oborona (Civil Defense), 3rd edition, (Moscow: Vysshaya Shkola, 1977), p. 252; Colonel A. Kostrov, "Protection Against Weapons of Mass Destruction," Voyennyye Znaniya, No. 2, February 1978, p. 30; N.P. Olovyanishnikov, editor, Grazhdanskaya Oborona, (Moscow: Vysshaya Shkola, 1979), p. 169.
5. Olovyanishnikov, op. cit., p. 169; Kostrov, op. cit.; I.M. Zhukov, editor, Voyenno-Patrioticheskoye Vospitaniye Starsheklassnikov (Military-Patriotic Training for Seniors), (Moscow: Pedagogika, 1982), passim.
6. "New Program-New Demands," Sovetskiy Patriot (Soviet Patriot), August 10, 1975; "From the Beginning," Voyennyye Znaniya, No. 8, August 1975, pp. 20-23; Colonel V. Ol'shevskiy, "With Accent on Practice," Voyennyye Znaniya, No. 10, October 1975, p. 24.
7. "The Program Has Changed," Voyennyye Znaniya, No. 11, November 1981, pp. 24-25.
8. Ibid.
9. Ibid.; Kostrov, op. cit.
10. "The Program Has Changed," op. cit.; M. Frolov, "Observation Post," Voyennyye Znaniya, No. 11, November 1982, pp. 28-29; Zhukov, op. cit.; Colonel General Yu.A. Naumenko, editor, Nachal'naya Voyennaya Podgotovka (Initial Military Training), 4th edition, (Moscow: Voenizdat, 1982), pp. 193-253; V. Marakov, "During Natural Disasters," Voyennyye Znaniya, No. 12, December 1982, pp. 22-23.
11. Frolov, op. cit.

12. See L. Goure, The Soviet Civil Defense Medical Preparedness Program, Final Report, Science Applications, Inc., March 1984, prepared for the Federal Emergency Management Agency under Contract EMW-C-0571.
13. "To Explain and Convince," Voyennyye Znaniya, No. 11, November 1981, p. 24.
14. Colonel S. Semenov, "How to Develop Standards," Voyennyye Znaniya, No. 2, February 1984, p. 19.
15. Ibid.
16. Egorov et al., op. cit., p. 23.
17. Olovyanishnikov, op. cit., pp. 171-172; N. Konovalov, "Two Days in a Pioneer Camp," Voyennyye Znaniya, No. 5, May 1984, p. 27.
18. Colonel General A.L. Getman, "Zarnitsa," Sovetskaya Voyennaya Entsiklopediya (Soviet Military Encyclopedia), Vol. 3, (Moscow: Voenizdat, 1977), pp. 409-410; Yu. Al'nikov, "They Learn During Games," Voyennyye Znaniya, No. 7, July 1983, pp. 30-31; S. Frolov, "A Campaign Which Does Not End," Voyennyye Znaniya, No. 12, December 1975, pp. 14-16; Lieutenant Colonel S. Semenov, "A Course for 'Orlenok'," Voyennyye Znaniya, No. 5, May 1982, p. 24.
19. V. Nesterenko, "At The Leading Edge of Medical Defense," Voyennyye Znaniya, No. 6, June 1976, p. 26.
20. "The Program Has Changed," op. cit.
21. Colonel A. Kostrov, "In the Forefront—Practice," Voyennyye Znaniya, No. 12, December 1975, p. 32.
22. For example, see O. Glusharekova, "Rescue on the Premises," Krasnaya Zvezda (Red Star), November 24, 1973; Lieutenant Colonel B. Nikitin, "In All the Faculties of the Institute," Krasnaya Zvezda, October 5, 1974; N. Yanchenko, "On a Firm Scientific Basis," Voyennyye Znaniya, No. 5, May 1976, p. 32; M. Plastunov, "Students are Researching," Voyennyye Znaniya, No. 5, May 1984, p. 22.
23. "Taking Into Account Their Specialty," Voyennyye Znaniya, No. 3, March 1982, p. 25; Goure, The Soviet Civil Defense Medical Preparedness Program, p. 30.
24. Egorov et al., op. cit., p. 251.
25. G.A. Karpov, USSR Minister of Higher and Secondary Education, "New Program for Civil Defense Training," Vestnik Vysshey Shkoly (Herald of the Higher School), No. 4, April 1975, pp. 31-32.

26. Ibid.
27. Goure, The Soviet Civil Defense Medical Preparedness Program, pp. 27-30.
28. Ibid., pp. 53-55, 78-86.
29. Ibid., p. 31; Colonel of Medical Service R. Gulyanskiy and K. Dalinda, "More Practice," Voyennyye Znaniya, No. 3, March 1976, p. 21; Major General V. Mikhaylov and G. Katkovskiy, "Skills Needed By Everyone," Krasnaya Zvezda, June 18, 1979; P.P. Babinskiy and N.I. Glebov, Organizatsiya i Taktika Meditsinskoy Sluzhby Grazhdanskoy Oborony (Organization and Tactics of the Civil Defense Medical Service), (Kiev: Vysshaya Shkola, 1980), *passim*; N.G. Gavinskaya, "...And Psychological Preparation," Voyennyye Znaniya, No. 2, February 1983, pp. 18-19.
30. Egorov et al., *op. cit.*, p. 249.
31. Ibid.
32. Vilnius Radio, December 30, 1983.
33. Colonel V. Mal'tsev, Sovetskii Kirgizstan (Soviet Kirgizia), February 18, 1983.
34. Colonel A. Zaytsev, "New Tasks, New Demands," Voyennyye Znaniya, No. 10, October 1983, pp. 12-13.
35. Colonel A. Zaytsev, "Tasks and Duties of the Population," Voyennyye Znaniya, No. 12, December 1982, pp. 21-22.
36. See L. Goure, Soviet Post-Strike Civil Defense Rescue, Damage-Limiting, Repair and Restoration Operations, Final Report, Science Applications, Inc., August 1982, prepared for the Federal Emergency Management Agency under Contract No. EMW-C-0571.
37. Major General M. Maksimov, "Nuclear Weapons and Protection Against Them," Voyennyye Znaniya, No. 1, January 1983, pp. 22-23.
38. B. Rykunov, "Special Characteristics of Protection Against Toxic Agents," Voyennyye Znaniya, No. 1, January 1983, pp. 26-27.
39. Colonel of Medical Service M. Gogolev, "Bacteriological Weapons," Voyennyye Znaniya, No. 2, February 1983, pp. 23-24.
40. Colonel Yu. Kosov, "Conventional Weapons," Voyennyye Znaniya, No. 2, 1983, pp. 22-23.

41. G. Penzev, "Collective Means of Protection," Voyennyye Znaniya, No. 3, March 1983, pp. 24-25.
42. Colonel of Engineers, V. Viktorov, "Gas Masks, Respirators...", Voyennyye Znaniya, No. 3, March 1983, pp. 26-27.
43. Major General Ye. Kuz'menko, "Dispersal and Evacuation," Voyennyye Znaniya, No. 4, April 1983, pp. 16-17.
44. See L. Goure, The Soviet Crisis Relocation Program, Final Report, Science Applications, Inc., May 1983, prepared for the Federal Emergency Management Agency under Contract No. EMW-C-0571.
45. Major General Ye. Kuz'menko, "Warning Signals," Voyennyye Znaniya, No. 4, April 1983, pp. 17-18.
46. Colonel of Medical Service, M. Gogolev, "Self-Aid and Mutual Aid," Voyennyye Znaniya, No. 5, May 1983, pp. 28-29.
47. P. Kurtsev, "To Know How to Give First Aid," Voyennyye Znaniya, No. 5, May 1983, p. 23.
48. Colonel A. Zaytsev, "Examination for Everyone," Voyennyye Znaniya, No. 5, May 1983, pp. 29-30.
49. "Subject 11, Civil Defense at an Installation," Supplement in Voyennyye Znaniya, No. 9, September 1983.
50. "Subject 12, Specifics of Protecting Children," Supplement in Voyennyye Znaniya, No. 9, September 1983.
51. "Subject 13, Protection of Food, Fodder and Water," Supplement in Voyennyye Znaniya, No. 10, October 1983.
52. "Subject 14, Protection Measures for the Home (Apartment)," Supplement in Voyennyye Znaniya, No. 10, October 1983.
53. "Subject 15, Blackout of Residential and Production Buildings," Supplement in Voyennyye Znaniya, No. 11, November 1983.
54. "Subject 16, Individual Means of Medical Protection," Supplement in Voyennyye Znaniya, No. 11, November 1983.
55. Egorov et al., op. cit., p. 107; Army General A.T. Altunin, editor, Grazhdanskaya Oborona (Civil Defense), (Moscow: Voenizdat, 1980), p. 111.
56. "Subject 17, Means of Skin Protection," Supplement in Voyennyye Znaniya, No. 12, December 1983.

57. "Subject 18, Actions of the Population in Centers of Nuclear Destruction and While Participating in Rescue Work," Supplement in Voyennyye Znaniya, No. 12, December 1983.
58. "Subject 19, Action of the Population in Zones of Radioactive Contamination; Methods of Anti-Radiation Defense," Supplement in Voyennyye Znaniya, No. 1, January 1984.
59. "Subject 20, Medical Self-Help and Mutual Aid," Supplement in Voyennyye Znaniya, No. 1, January 1984.
60. "Concluding Session," Supplement in Voyennyye Znaniya, No. 2, February 1984.
61. Voyennyye Znaniya, No. 4, April 1978, p. 18.
62. Ibid.; Major General O. Nikolayev, "Skills for Everyone," Voyennyye Znaniya, No. 7, July 1974, pp. 19-20.
63. Colonel S. Bystritskiy, "Against Formalism in Training," Voyennyye Znaniya, No. 7, July 1980, p. 16; I. Strel'tsov, "On The Basis of the Housing Administration," Voyennyye Znaniya, No. 6, June 1983, p. 9; Egorov et al., op. cit., pp. 249-250; Yu. Aleksandrov, "How to Help Yourself and Your Comrade," Voyennyye Znaniya, No. 4, April 1979, pp. 14-15.
64. Egorov et al., op. cit., p. 249.
65. Ibid., p. 250.
66. Major General A. Korzhavin, "Increasing the Effectiveness of Civil Defense Information," Sovetskiy Patriot, April 4, 1979.
67. "Training," Voyennyye Znaniya, No. 9, September 1977, p. 26.
68. For example, see Lieutenant General V. Dement'yev, "Vigorously and Purposefully—Civil Defense," Krasnaya Zvezda, September 1, 1982.
69. Krasnaya Zvezda, July 2, 1970.
70. N. Nadzhafov, "According to a Thought-Out Plan," Voyennyye Znaniya, No. 8, August 1975, p. 17; Colonel R. Khudyakov, "An Active Assistant," Voyennyye Znaniya, No. 11, November 1975, pp. 28-29; Major General A. Korzhavin, "Our Main Task," Voyennyye Znaniya, No. 12, December 1980, pp. 7-8.
71. Korzhavin, "Our Main Task," op. cit.
72. D. Fan'yan, "Journalists Are Being Trained," Voyennyye Znaniya, No. 7, July 1977, p. 30.

73. Colonel G. Rakhmanin, "Radio at the Installation," Voyennyye Znaniya, No. 5, May 1976, p. 30; Ned Temko, "Soviets Try For 'Survival' in War," Christian Science Monitor, July 11, 1983.
74. K. Kotlukov, "Telecast: Forms and Types," Voyennyye Znaniya, No. 8, August 1974, pp. 31-32. See also Lieutenant Colonel M. Shapron, "The TV Screen Shows," Sovetskiy Patriot, January 22, 1975; Rakhmanin, op. cit.
75. For example, see Major General Ya. Kozachuk, "In Step With the Times," Voyennyye Znaniya, No. 7, July 1976, pp. 28-29; Major General P. Dubrova, "A Vital, Creative Matter," Voyennyye Znaniya, No. 11, November 1980; Korzhavin, "Our Main Task," op. cit.; Colonel General V. Dement'yev, "Actively and Creatively—Some Questions on the Further Improvement of Civil Defense Propaganda in View of Requirements of the June 1983 CPSU Central Committee Plenum," Voyennyye Znaniya, No. 11, November 1983, pp. 8-9; N. Bolotov, "A Seminar and Lecture Bureau for Activists," Voyennyye Znaniya, No. 11, November 1978, p. 21; K. Kotlukov, "The Time Requires," Voyennyye Znaniya, No. 11, November 1982, p. 20.
76. Colonel A. Rudenko, "On the Screen—Amateur Films," Voyennyye Znaniya, No. 12, December 1982, p. 19.
77. D.A. Sutankin, "Everyone's Sacred Duty," Sovetskaya Estoniya (Soviet Estonia), September 8, 1977.
78. Rudenko, op. cit.
79. Dubrova, op. cit.

Section 4

PUBLIC RECEPTIVITY TO AND EFFECTIVENESS OF THE CIVIL DEFENSE INSTRUCTION PROGRAM

Although mandatory instruction of the Soviet population in civil defense is of long-standing, a program of this magnitude is inevitably fraught with problems, difficulties, and shortcomings in its implementation. Indeed, this is especially likely to be the case when the programs keep changing and when there are multiple programs for various elements of the population carried out simultaneously. Soviet officials and publications are quite candid in acknowledging that the programs have been implemented unevenly, and that they have and continue to suffer from various organizational, administrative, bureaucratic, practical, and qualitative problems. These Soviet public criticisms, however, should be viewed with some caution in assessing the instruction program as a whole. One reason for this is that it is a deliberate Soviet practice to publicly identify shortcomings and to name specific officials and organizations responsible for them in order to bring about improvements and to stimulate greater efforts. Furthermore, the Soviets usually insist that instances of shortcomings and failures in the implementation of the programs are the exception rather than the rule, and that in the great majority of cases, the instruction has and continues to achieve its objectives.

4.1 SOVIET VIEWS ON PUBLIC ATTITUDES TOWARDS AND RECEPTIVITY TO CIVIL DEFENSE INSTRUCTION

One might think that, given the fact that civil defense instruction is mandatory for the population, its attitude and receptivity to it is largely irrelevant. Of course, this is not so in reality. Without a favorable attitude by the public towards such instruction, the trainees will either manage to avoid much of it or will not retain what they have been taught. Furthermore, the authority's insistence on forcing the population to attend instruction classes generates resentment and criticism of the leadership and its policies.

The fundamental belief of the Communist Party and its leadership is that public attitudes are malleable. They can be shaped as desired by appropriate guidance, indoctrination, and propaganda. Of course, there are "unstable," "morally weak" elements in the population who persist in violating Soviet political, social, and moral norms, and who are easy prey to Western propaganda. But even so, the majority of them can be "re-educated" and made to mend their ways. Given this Soviet view, shortcomings in public attitude towards civil defense instruction usually are not blamed on the public itself but are perceived as failures of indoctrination and propaganda. Specifically, Soviet officials and publications usually blame poor local leadership and organization, low quality and methodology of instruction, insufficient attention to propaganda or its lack of appeal, shortcomings in the "military-patriotic" education of the public, and so forth.

Soviet publications admit a certain amount of failure to motivate the population in the matter of civil defense and its instruction. For example, it is said that "a certain segment of the population somewhat underestimates the importance of universal civil defense training."^{1/} Or again, as a civil defense official has noted,

Each year we teach in accordance with the civil defense program and we repeat the things many times. But tell me, why is it that at times that which should be known literally like the multiplication table is poorly mastered and poorly remembered? Just why is it that the QUANTITY of lessons conducted annually was far from always transformed into QUALITY of acquired knowledge and skills?^{2/}

Instances are mentioned that the trainees are inattentive or even "come right out and express...doubts about the usefulness of such classes."^{3/}

One apparent reason for negative attitudes towards civil defense instruction among the population is that the adult citizens must give some of their free time to it. This is obviously resented by some. In the case of managers, administrators, and technicians who are required

to attend civil defense courses of several days' duration, some begrudge the time away from what they may believe to be more important or urgent activities. One consequence of this is that some people try to avoid attending the instruction classes or refuse to actively participate in the instruction or to learn. For example, instances are cited where attendance of non-working adults in the classes amounted to only some 30 percent of the non-working residents in various housing projects.^{4/} Similarly, it has been reported that at civil defense courses for managers, sometimes up to half of the trainees fail their first test because many do not actively participate in the classes and resent having been required to attend them.^{5/}

Another factor has been the repetitiousness of the courses. This was especially true in the case of the pre-1983 20-hour basic instruction program, but is probably true to some extent even in the case of the current program. The trainees see it as mere repetitions of the same materials and, therefore, become not only bored but resentful and unwilling to maintain a serious attitude towards the instructors and the training. As one article noted, "There is no point in having well-trained people again and again repeat that which they know and are able to do."^{6/} Soviet publications have often complained that some instructors fail to change their methods of instruction, to take into account the level of knowledge of the trainees, and simply continue to teach each subject the same way.

According to Soviet assessments of the instruction program, a major cause of its difficulties is the poor quality of the instructors. In some cases, the instructors are poorly trained themselves; in others, they lack interest in the subjects they teach; still in others, they are boring teachers or lack understanding of effective instruction methods. This problem received a great deal of attention in the Soviet Union and various methodological councils, consultations, and seminars were set up to help the instructors. Still the problem is far from solved. According to various Soviet civil defense officials, some of the fault lies

with the quality of the instruction courses for instructors which sometimes fail to keep up with the demands of a new instruction program.^{7/} It is asserted that one reason for lack of interest on the part of the trainees is the tendency of instructors to teach theory and to minimize practical instruction. The substitution of verbal for practical instruction is especially criticized.^{8/} It is claimed that practical demonstrations of civil defense equipment, visits to shelters and civil defense training facilities, and other forms of active involvement of the trainees in the instruction greatly helps to stimulate their interest and also gives them a practical understanding of civil defense means and capabilities to protect the population. The advice to the instructors is to "convince them with deeds rather than words."

In order to sustain the interest of his audience, the instructor must be capable of tailoring his presentation to its character and enliven his talk with references to local events or anecdotal material from civil defense experiences during World War II or natural disasters. For example, it is suggested that women become bored with technical details, while men may be more interested in them; that elderly people have a short attention span and worry about not having enough time to carry out their household duties; and so forth.^{9/}

It is claimed that the attitude of the working population towards civil defense and civil defense instruction is strongly influenced by the attitude of the managers.^{10/} Where the managers personally promote civil defense, take an active part in it, and effectively support their civil defense staffs, the quality of instruction and the attitude of the workers and employees towards it are likely to be better. Consequently, Soviet publications praise the managers, leaders, and "activists" who set a proper example and criticize, often by name, those who postpone or shorten instruction classes, fail to hold exercises or simplify them, and generally view civil defense "as a secondary matter."^{11/} It is undoubtedly true that the lack of interest in and support for civil defense on the part of some managers affects the attitude towards the civil defense programs by their subordinates.

It is undoubtedly difficult to sustain the Soviet population's interest in, let alone enthusiasm for, civil defense. After all, the program has been around for a long time, and on the whole has acquired a routine character, becoming to some extent a part of the Soviet population's life—like political meetings and lectures and other unavoidable activities foisted on it by the Communist Party and the state. Even so, the Soviet population's attitude towards civil defense tends to be influenced by two factors. One is the public's perception of whether the danger of a nuclear war is increasing or diminishing. The other is its perception of the consequences of a possible nuclear war and of the prospects for the Soviet Union's survival if it were to occur. Both of these factors, as is discussed below, pose problems for the Soviet civil defense instruction programs and affect how they are conducted.

4.2 THE CHARACTER OF SOVIET PUBLIC DOUBTS ABOUT THE EFFECTIVENESS OF CIVIL DEFENSE AND SOVIET METHODS OF DEALING WITH THEM

The attitude of the Soviet population towards war is influenced in part by its World War II experience. In that war some 20 million Soviet citizens were killed, another 20 million were lost as a result of declining birth rates, and there was much destruction which caused the population great hardships and privations not only during the war but also for many years after its termination. True, the actual memory of this experience is now rapidly fading away as the war generation is dying out. However, the Soviet leadership has and is continuing a massive campaign aimed at the post-war generations to glorify the Soviet Union's war record and the "heroism" of its people. The story of the Soviet people's war experience is today a part of the "military-patriotic education" program for the entire population. The effects of this campaign and program appear to be contradictory. On the one hand, they promote martial values, "combat glory," militant patriotism, support for the build-up of Soviet defense capabilities, interest in military service and career, and, as was mentioned, "psychological tempering" to prepare the population to bear the sacrifices and hardships of a possible war

and retain its will to fight on to victory. On the other hand, however, they serve as a reminder of the sufferings of the Soviet people and of how devastating a war may be.

The appearance of nuclear weapons and persistent Soviet propaganda about the alleged aggressive intentions of the West and of the United States in particular naturally have generated concern among the Soviet population about the possibility of a nuclear war and its consequences. The problem for the Soviet leadership has been to strike a balance between its propaganda concerning the alleged threat of a nuclear war and reassurance of the Soviet population that the Soviet Union could effectively defend itself and survive such a war. This was and remains true also for the Soviet civil defense public instruction programs which, while justifying civil defense in terms of a possible threat of war and of effects of "weapons of mass destruction," must seek to convince the population of the utility and effectiveness of the measures taken for its protection.

While it is not known how widespread public skepticism about civil defense has and continues to be in the Soviet Union, there is no doubt that it exists. Western correspondents have repeatedly mentioned two jokes which began to be widely circulated in the Soviet Union in the 1960s and early 1970s. One of these is a take-off on the Russian acronym for Civil Defense, i.e., Grazhdanskaya Oborona, which officially is shortened to GO. However, when one combines the first two letters of the Russian name, the acronym becomes "GROB" which is the Russian word for "coffin." The other joke consists of the advice that in the event of a nuclear attack, one should wrap oneself in a sheet or shroud and "slowly walk to the cemetery." The punch line of the joke is the question, "Why walk?" and the answer, "So as not to cause panic!"^{12/} Aside from jokes, Soviet publications have quoted some people as saying, "There can be no protection against nuclear weapons, and if war should occur, everything living will perish," or again, that "Few will be able to save themselves in a nuclear war."^{13/} Of course, the existence of

such views among the population is implied by the insistence of Soviet civil defense officials on the need to instill in the population "confidence" and "faith" in civil defense.

Contributing to the "no-survival" view among the population has been the description of the effects of "weapons of mass destruction" in the Soviet media and in the civil defense instruction courses. One Soviet psychologist observed that detailed discussions of weapons effects negatively influence the attitude of audiences, especially those made up of women, towards civil defense instruction.

In training groups made up primarily of women, it [i.e., the discussion of weapons effects] not only did not become a stimulating motive for more serious study of the means and methods of protection against weapons but, on the contrary, at times caused directly the opposite reaction.^{14/}

Indeed, this poses a dilemma for civil defense instruction, i.e., how much information to impart to the trainees about weapons effects so as to stimulate their interest in protective measures and justify the need for civil defense without generating a sense of hopelessness in the effectiveness of these measures. In 1974 the Chief of USSR Civil Defense felt it necessary to publicly caution civil defense instructors not to "exaggerate" the destructiveness of modern weapons and urged them instead to stress that there are effective defenses against such weapons.^{15/}

Soviet publications cite various methods for countering public skepticism about civil defense. One approach has been to argue that nuclear weapons are not "absolute" and that an effective defense can always be found against them.^{16/} It is asserted that "although modern weapons are called mass destruction weapons, they will strike not the mass, but only those who neglect studying, mastering and applying these [i.e., civil defense] measures,"^{17/} or that everyone who studies the ways and means of protection "will save his own life and that of others."^{18/} It is pointed out that if the population of Hiroshima had had modern means of civil defense protection and had known how to use them, there

would have been far fewer casualties.^{19/} The instructors also recall the effectiveness of civil defense during World War II, and note that veterans of the war tend to have a "serious" attitude towards civil defense. Another approach, which is frequently recommended to civil defense instructors, is to convince the trainees by means of "practical instruction," i.e., visits to shelters with explanation on the spot of their protective qualities, the wearing by the trainees of gas masks in "smoke rooms," participation in civil defense exercises, and so forth.^{20/} Indeed, it is argued that,

It is only with practical exercises that we can convince any individual of and demonstrate the vital necessity for particular measures directed towards improving civil defense against modern weapons.^{21/}

Of course, in addition to this, great emphasis is placed on the Soviet citizen's patriotic duty to support civil defense as one of the means of strengthening the Soviet Union's defense capability, which in turn can be an effective deterrent to Western aggression.

During the detente in U.S.-Soviet relations in the 1970s, civil defense instructors appear to have had to contend with a popular attitude along the lines that the detente made civil defense preparations unnecessary. It was pointed out, therefore, that "In spite of a certain relaxation of international tension, the danger of imperialist aggression against the Motherland and the countries of the socialist fraternity has not been eliminated."^{22/} The official line taken by Brezhnev and other Soviet leaders was that imperialism, i.e., the West, would remain aggressive by its very nature, and that the threat of war would persist so long as imperialism survives. It was asserted, therefore, that despite the detente in U.S.-Soviet relations, there was a continuing need to further strengthen Soviet defense capabilities. Indeed, the initiation of the detente and the signing of the SALT-I Agreement were followed by stepped-up Soviet efforts to improve civil defense and the launching of a new civil defense instruction program for the population.

The worsening of U.S.-Soviet relations in the late 1970s and the early 1980s and the alleged intensification of the arms competition by the United States have been and continue to be used to justify Soviet civil defense and its instruction program for the population. As was noted, the instruction includes discussion of what is claimed to be the increased danger of war as a consequence of the U.S. buildup of strategic weapons and the need for further strengthening of Soviet defenses, while at the same time praising Soviet efforts to ensure peace and to save mankind from the "disastrous" consequences of a nuclear war.

One element of the Soviet "peace campaign" aimed at influencing world public opinion—especially the West—to oppose new Western arms programs and to accept Soviet arms control proposals has been to publicly deny the possibility of winning a nuclear war and to suggest that such a war may result in the destruction of civilization, if not of mankind. Already during the 1970s, Brezhnev had suggested this in several speeches.^{23/} Such dire predictions of war outcome were also cited by other Soviet spokesmen.^{24/} By the start of the 1980s, Brezhnev publicly asserted that "the nature of modern weapons has become such that if they were unleashed, the future of mankind would hang in the balance."^{25/} As a part of the Soviet propaganda campaign, the Soviet Union set up various organizations of professionals, physicians, and scientists paralleling similar organizations in the West, such as the Physicians for Social Responsibility. The Union of Concerned Scientists, and so on. Of course, unlike the peace movements in the West—which are entirely private, the movement and its various organizations in the Soviet Union are sponsored and controlled by the Communist Party and its propaganda apparatus. Indeed, several officially unsanctioned peace groups in the Soviet Union have been ruthlessly suppressed and their members jailed.

The significant thing about the Soviet peace organizations is their tendency to repeat the "worst-case" war outcome scenarios propounded by their Western colleagues. The objective seems to be to reinforce the latters' claims and help generate pressure on Western governments to

adopt a nuclear freeze and Soviet arms control proposals and refrain from deploying various new missile systems. The Soviet organizations' spokesmen have been fairly indiscriminate in citing predictions of war outcome by Western peace organizations. For example, Soviet mentions of possible global fatalities which may result from a large nuclear war range from 350 million to in excess of two billion, depending on which source a particular spokesman quotes.^{26/} Soviet scientists in international forums have also enthusiastically embraced the "Nuclear Winter" hypothesis propounded by a group of American scientists who claim that catastrophic climatic changes may result from even a relatively small strategic nuclear exchange.^{27/} Here again, all the evidence indicates that the findings of Soviet scientists purporting to confirm the American "Nuclear Winter" thesis are not based on independent Soviet research but on a "play-back" of Western scenarios, assumptions, and data—a fact which some Soviet scientists acknowledge at least in private conversations.

Of course, Soviet discussions of the "mankind destroyed" thesis are aimed primarily at Western audiences and are largely presented in meetings with such audiences in the West. Furthermore, there are no specific Soviet public descriptions and analyses of the effect of a nuclear war on the USSR and its population, in contrast to widespread speculations and estimates in the United States about the possible effects and consequences of a Soviet nuclear strike on this country. In the Soviet Union such scenarios and estimates are classified so that Soviet propaganda at home and abroad discusses the outcome of a possible nuclear war in general, global terms.

Nevertheless, there appears to be considerable "leakage" to the population through the mass media from Soviet propaganda aimed primarily at the West which portrays nuclear war in terms of enormous population losses, the "end of civilization," or even the dying out of mankind as a consequence of a "Nuclear Winter." For example, an article in the Georgian newspaper Komunisti predicted the immediate death in a nuclear

war of 700 million persons worldwide, of whom only three million would be military, and proclaimed that "the use of nuclear weapons would inevitably destroy mankind and all life on earth."^{28/} An article in the national daily newspaper *Izvestiya*, reporting on a meeting of U.S. and Soviet scientists in Washington, D.C. in December 1983, quoted Senator E. Kennedy as declaring that the question is "not of how many people would survive a nuclear strike, but how long it would take them to die on a dying planet," and went on to observe that,

The idea that nuclear war would have catastrophic ecological consequences and would create a deadly threat to mankind itself and its civilization permeated the speeches of all of the two country's scientists without exception.^{29/}

Again, in another publication, Soviet Academician A. Bayev is quoted in a joint telecast with some American scientists as saying:

Half of the population subjected to nuclear attack would be destroyed in a very short time. For those who survive, life would be difficult and precarious, and probably the majority of them would not be able to survive.^{30/}

In a televised speech on March 14, 1984, the President of the USSR Academy of Sciences, A.P. Aleksandrov, said,

Studies show that the damage resulting from a nuclear war would lead to a situation in which our planet would almost certainly become uninhabitable, mankind would die, and thus the history of mankind would come to an ignominious end.^{31/}

The Soviets do not publicly assess the effects of this sort of information on the Soviet public and on its attitude towards civil defense. It seems likely, however, that to the extent that the public is aware of these arguments and predictions by Soviet scientists, physicians, and so forth, this could erode the efforts of USSR Civil Defense to instill in the population "confidence" in the effectiveness of civil defense. As far as the Soviet civil defense program is concerned, it totally disregards this particular propaganda line and in

no way suggests that there are any grounds for questioning or reassessing the utility or effectiveness of civil defense. In the midst of the Soviet propaganda campaign discussed above, the Chief of USSR Civil Defense declared that "the party and state...are paying constant attention to improving USSR Civil Defense," and that,

The necessary stock of collective [i.e., shelters] and individual means of defense is being created, tasks of improving the stable working of the economic sectors and installations [in war conditions] are being resolved, the forces and capabilities required to overcome the consequences of an enemy attack are being prepared, and the training of the population in methods of protection against modern weapons has been organized everywhere.^{32/}

Indeed, as was noted, a new civil defense instruction program aimed at further raising the population's level of civil defense knowledge and skills was launched in 1983.

Apparently the Soviets have found a need to explain the apparent inconsistency of their continuing to strengthen the Soviet Union's civil defense capabilities while at the same time predicting that a nuclear war would result in the destruction of civilization, if not of mankind. In a Radio Moscow broadcast in English on April 24, 1984, the well known Soviet "military affairs specialist," Dr. Lev Semeyko, was asked to respond to the following question:

In recent years, leading scientists around the world have come to believe that a nuclear conflict would mean the end of civilization, yet a number of countries—including the Soviet Union—continue to strengthen their civil defense, building shelters and training their populations to handle protective gear. Is there any logic in this, and is this a sign that vigorous preparations are under way for nuclear warfare?^{33/}

Semeyko wrote that even though it is not possible to "give full protection from the effects of a nuclear war," "the Soviet Union is working to

strengthen its civil defense" for several reasons. He claimed that "to strengthen civil defense is to show concern about millions of Soviet lives" and that Soviet citizens expect their government "to strive" to protect them. Furthermore, in the face of the U.S. and NATO nuclear threat:

The Soviet Union has to make sure that its population will have appropriate protection against possible nuclear aggression. This requires not only armed forces that would stand up to such aggression but an effective civil defense system as well.^{34/}

While claiming that "the West deliberately understates possible Soviet losses" in a nuclear war when it estimates them at some 10 percent of the Soviet population, Semeyko avoided saying what such a figure may be and any suggestion that the Soviet Union may be destroyed. Instead, he claimed that "by attending to civil defense, the Soviet leadership by no means wants the people to feel overly optimistic about nuclear war. Such a war would be a disaster."^{35/} Overall, however, Semeyko suggested that civil defense could mitigate the consequences of a nuclear war.

Undoubtedly, Soviet civil defense instructors will have to continue to struggle with public skepticism about the effectiveness of civil defense. There is no indication that Soviet civil defense propagandists have developed a uniform response to the "Nuclear Winter" thesis which Soviet scientists publicly concur with. Recent Soviet materials give the impression that the main emphasis in the public civil defense instruction program is on the "sacred" and "patriotic" duty of Soviet citizens to participate in civil defense and thereby to help strengthen the Soviet Union's defense capability which, in turn, is said to deter Western aggression. The very first lesson in the current three-year civil defense instruction program points out that,

The USSR Constitution guarantees the citizens many rights and freedoms. However, along with this, it places on them responsible and honorable duties. And one of the most important of these responsibilities is the defense of the Fatherland which is the sacred duty of every citizen of the USSR...

In a modern war, the distinction between the front and the rear [of the country] becomes erased. The rear, which is the source of the might of the Armed Forces, now requires reliable protection, which civil defense is called upon to carry out, closely acting with the Armed Forces... In a large measure, it predetermines the viability of the state.^{36/}

Of course, USSR Civil Defense has the advantage that public instruction in civil defense continues to be compulsory. The population must undergo it regardless of any skepticism it may entertain. The threat that individuals who fail to learn and pass the examinations at the end of each year's training period must repeat these examinations may influence even skeptics to meet the program's requirements. Furthermore, Soviet official propaganda's picturing of a growing threat of war may help lend a certain urgency and interest to the public's study of civil defense measures. After all, even if the population is somewhat skeptical about the effectiveness of civil defense, many people may still prefer to know how to enhance their prospects for survival.

4.3 SOVIET ASSESSMENT OF THE SUCCESSES AND FAILURES OF THE PUBLIC INSTRUCTION AND TRAINING PROGRAMS

Soviet assessments of the civil defense instruction program indicate that the results are mixed. Most assessments insist that the instruction and training of the population is improving, that the quality of instruction is becoming better, and that shortages of training materials have been largely eliminated. For example, at the end of the first training year of the current three-year instruction program, the Deputy Chief of USSR Civil Defense for Combat Training wrote,

Analyzing what has been accomplished, one becomes convinced that as a result of the training in 1983, the non-militarized formations, workers, employees, collective farmers and other groups within the population have made considerable progress in the matter of their readiness to discharge their civil defense responsibilities, and that they now display more personal responsibility for the timely and quality performance of scheduled training assignments and for carrying out other civil defense measures.

One could cite a multitude of examples of exceptionally conscientious, creative approaches to the organization of the instruction of people and of active participation on the part of workers, employees, collective farmers, and students in the implementing of civil defense measures at their installations.³⁷

Indeed, Soviet publications continuously publish reports of successful civil defense training at specific industrial enterprises and collective farms and in schools. Generally, instruction of students—which is a part of the standard mandatory curriculum—presents the least problems. Nevertheless, the publications and Soviet officials have and continue to complain also about shortcomings.

The most persistent shortcoming has been and apparently remains in the matter of the quality of instruction. As was noted, instructors are sometimes poorly trained, they tend to substitute lectures for practical instruction or to substitute the showing of a film for classroom work and exercises. For example, in the same article by the Deputy Chief of USSR Civil Defense for Combat Training, he complained that,

In a number of instances, however, we are still encountering substantial deficiencies. Instruction is frequently given in the most formalistic [i.e., perfunctory] manner and fail to generate any lively interest among the audience.

Senior officials in the housing and municipal services sector frequently fail to take the necessary steps for the instruction of both our working and non-working citizens. Not everyone is familiar with the instruction pamphlet, Everyone Must Know and Be Able To Do This...

It has been shown that in some instances the population has not been adequately trained in actions in response to civil defense warning signals; in the rules for occupying shelters and how to behave in them; has inadequate skills in the use of individual means of protection, giving first aid to oneself and to others, adapting basements for use as fallout shelters, or building simple field-type shelters.^{38/}

These particular complaints are not new. They have been raised at most reviews of the training program.^{39/} The Chief of Civil Defense of the Russian Socialist Federated Soviet Republic (RSFSR), the largest republic of the USSR, wrote in 1981,

Concerning the question of training the population in protection against modern weapons, efforts to solve this task have been underway for many years; and again and again, following analyses of the results of the training, unresolved problems have become evident.^{40/}

He blamed this largely on the complexity of simultaneously running different instruction programs for various elements of the population and the lack of strict supervision everywhere over their implementation.

One of the most frequently cited difficulties in the instruction program for the working population is the disruption of instruction schedules by the managers who may be pushing to meet production goals, and as a result training sessions may be either postponed or not carried out at all.^{41/} In the case of the non-working adults, instruction is often neglected because of the greater difficulty of finding instructors and organizing training groups, the latter problem being sometimes compounded by bad scheduling of classes. The program of building civil defense training facilities has been implemented in an uneven manner.^{42/}

Despite shortcomings, there is every reason to believe that the great majority of the Soviet population has been and continues to be exposed to civil defense instruction, even though the quality of this instruction is uneven. According to Soviet assessments, to date no

civil defense instruction program has been completely successful in meeting all of its stated objectives. No doubt the current three-year program will suffer a similar fate. Indeed, past experience suggests that the implementation of this program will require more than three years because the retraining of instructors for each phase of the program will not be completed in that time. Still, the program's shortcomings should not be exaggerated. In addition to a corps of some 20 million trained members of the civil defense forces, the repetition of the instructions through most of a Soviet citizen's life tends to ensure that a high proportion of the population does acquire and probably retains knowledge and skills necessary to implement civil defense measures in an emergency. Furthermore, because of a considerable turnover in the personnel of civil defense units who have received additional instruction and training, there is a continuous infusion into the general population of better trained persons. Finally, if we are to believe Soviet publications, many organizations—possibly a majority of them—usually appear to implement the instruction program in a reasonably effective and qualitatively satisfactory manner.

In the matter of civil defense instructional and propaganda materials, there have been noticeable improvements in their quality over the years. There is a large number of series of well-designed training posters for sale. These are used primarily in the instruction classes and also on the so-called civil defense corners or displays which are organized in the work places and educational institutions. Posters are also displayed in public places, especially in the course of the so-called civil defense days, weeks or months held in the cities and large territorial-administrative units.

There has been increasing use made of films, film strips and slides for instructional civil defense propaganda purposes. A significant number of them are amateur films. Such films are most often taken in the course of civil defense training exercises at industrial enterprises, collective farms, and during civil defense competitions. There

are also said to be numerous film studios, "many of which produce good films and film strips."^{43/} Many of the film strips and a portion of the films produced by these studios are in color and appear to be of good quality. It is noted, however, that there is a shortage of films dealing with civil defense at some types of industrial enterprises.^{44/} Periodic "film festivals" are held in the republics and various regions as well as in Moscow, open to the public, which also serve to allow local civil defense staffs to identify films they wish to use in their work. It has been suggested that amateur film studios be organized at the civil defense staffs or courses of the autonomous republics and provinces (oblasts and krays) in order to help make films for use in the training of civil defense formations. While Soviet sources reported relatively large attendances at the showing of civil defense films, it is not clear what proportion of the population attend the viewing voluntarily out of interest rather than because it is a part of the compulsory instruction program.

The basic instruction pamphlet, Everyone Must Know and Be Able To Do This, is 63 pages long and extensively illustrated with black and white sketches and diagrams. Particular points which the reader should remember are in bold print; for example, "You must know the location of the shelter or cover nearest to your place of work and residence," "You must know how to adapt or build a fallout shelter," "By skillful actions in the area of destruction, you will save yourself and others who are in trouble," "While acting in the zone of destruction, do not forget about safety measures!" etc.^{45/} The material covered in the pamphlet is comprehensive. It describes the threat and, in simple terms, the effects of nuclear, chemical and bacteriological weapons; discusses blast and fallout shelters and how to build simple fallout shelters; describes gas masks, protective coveralls, and how to make simple gauze or cloth masks; the use of individual medication kits and decontamination packets; how the population must behave during evacuation and in response to civil defense signals; protection of food and water; blackout measures;

actions in zones of destruction and contamination, and during rescue operations; first aid; firefighting; decontamination; and what people should do in the event of natural disasters. The pamphlet concludes by saying, " Everyone must know these instructions—grownups and children. It is the duty of every Soviet citizen to actively participate in all civil defense measures."

Although the price of the pamphlet is only 5 kopeks (about U.S. 7 cents) and has been printed in millions of copies, it is not known whether it is in the possession of a large number or a majority of households, although in principle everyone should have it. The nearly yearly printing of the pamphlet appears to suggest that it is given wide distribution, and it is certainly used in the course of instruction classes, especially for school children and retirees. Presumably, a majority of Soviet citizens have read the pamphlet at one time or another. Of course, it must be kept in mind that the Soviets do not rely on the self-study of this pamphlet as a primary method of civil defense instruction of the population. Rather, the pamphlet serves to supplement the organized compulsory classroom instruction program.

Section 4

FOOTNOTES

1. A.D. Sutankin, "Everyone's Sacred Duty," Sovetskaya Estoniya (Soviet Estonia), September 8, 1977.
2. G. Prikazchikova, "Do Adults Need Games," Voyennyye Znaniya (Military Knowledge), No. 11, November 1982, p. 26.
3. Sh. Menvelishvili and Lieutenant Colonel I. Ushko, "They are From the Dayt'kovo Crystal Plant," Voyennyye Znaniya, No. 2, February 1978, pp. 26-27.
4. Colonel S. Bystritskiy, "Against Formalism In Training," Voyennyye Znaniya, No. 7, July 1980, p. 16.
5. V. Komarov, "Available to All Courses," Voyennyye Znaniya, No. 11, November 1980, pp. 22-23.
6. "A Time For Fruitful Study," Voyennyye Znaniya, No. 1, January 1977, p. 22.
7. For example, see Lieutenant General D. Mikhaylik, deputy chief of USSR Civil Defense, "Adopt the New and the More Advanced," Voyennyye Znaniya, No. 12, December 1977, pp. 16-17; Lieutenant General V. Dyatlenko, "Courses at a New Stage," Voyennyye Znaniya, No. 6, June 1976, pp. 20-21.
8. For example, Menvelishvili and Ushko, op. cit.; Lieutenant General S. Kremenskiy, "Accomplishing the Main Task," Voyennyye Znaniya, No. 12, December 1975, pp. 18-19; Major General E. Paul'man, "The Direction—High Readiness," Sovetskaya Estoniya, January 31, 1975.
9. For example, see Prikazchikova, op. cit.; Bystritskiy, op. cit.; Menvelishvili and Ushko, op. cit.; Colonel General V. Dement'yev, "Actively and Creatively," Voyennyye Znaniya, No. 11, November 1983, pp. 8-9.
10. A. Bayev, "The Personal Example of a Leader," Voyennyye Znaniya, No. 7, July 1978, p. 21.
11. Sutankin, op. cit.; Lieutenant General S. Kremenskiy, "At a New Stage," Voyennyye Znaniya, No. 12, December 1974, pp. 24-25; O. Savchenko, "Improving Civil Defense," Sovetskaya Kirgiziya (Soviet Kirgizia), January 30, 1979; Major General Kh. Abol, "A Matter of Great Importance," Sovetskaya Latviya (Soviet Latvia) February 12, 1981; Bayev, op. cit.; Colonel General V. Chizh,

- "The ABC's of Practical Instruction," Voyennyye Znaniya, No. 4, April 1977, pp. 22-23.
12. For example, see J.F. Burns, "Russians, Too, Joke Sadly on Atom-War Survival," The New York Times, June 10, 1983.
 13. D. Soloyev, "The Living, Understandable Word," Voyennyye Znaniya, No. 3, March 1975, p. 25; M. Kachulin, "Be Conscientious, Be a Fighter," Voyennyye Znaniya, No. 4, April 1972, p. 18.
 14. Prikazchikova, op. cit.
 15. Colonel General A.T. Altunin, "An Important Aspect of Training," Uchitel'skaya Gazeta (Teacher's Gazette), August 22, 1974, and "Our Common Task," Professional'no-Technicheskoye Obrozovaniye (Professional-Technical Education), No. 12, December 1974, p. 34.
 16. For example, see Marshal of the Soviet Union N.V. Ogarkov, Vsegda v Gotovnosti k Zashchite Otechestva (Always in Readiness to Defend the Fatherland), (Moscow: Voenizdat, 1982), p. 36, and "Military Science and Defense of the Socialist Fatherland," Kommunist (Communist), No. 7, May 1978, p. 117; Colonel Yu. Alekseyev, "Stealth Aircraft," Krasnaya Zvezda (Red Star), July 28, 1982; Sutankin, op. cit.
 17. V. Mironov, "On Watch Over October," Voyennyye Znaniya, No. 12, December 1976, pp. 20-21.
 18. Kachulin, op. cit.
 19. Sutankin, op. cit.
 20. Menvelishvili and Ushko, op. cit.
 21. Lieutenant General S. Kremenskiy, "Always in Combat Readiness," Voyennyye Znaniya, No. 1, January 1974, p. 20. See also Major General A. Korzhavin, "The Decisive Factor," Voyennyye Znaniya, No. 3, March 1978, pp. 18-19.
 22. "Our Sacred Duty," Voyennyye Znaniya, No. 2, February 1978, p. 29.
 23. For example, see L.I. Brezhnev speech at the Anniversary Celebration of VE Day, Pravda, May 9, 1975, and speech in Poland, Pravda, July 22, 1974.
 24. For example, see P. Zhilin and I. Rybkin, "Militarism and Contemporary International Relations," International Affairs (Moscow), No. 10, October 1972, p. 13; G. Arbatov, "Strength Policy Statements," World Marxist Review, No. 2, February 1974, p. 56.

25. L.I. Brezhnev, Speech at the USSR Supreme Soviet, Pravda, June 24, 1981.
26. For example, see "Scientists Against the Threat of Nuclear War," Vestnik Akademii Nauk SSSR (Herald of the USSR Academy of Sciences), No. 9, September 1983, pp. 32-120.
27. For example, see R.P. Turco, O.B. Toon, T.P. Ackerman, J.B. Pollock and Carl Sagan, "Nuclear Winter: Global Consequences of Multiple Nuclear Explosions," Science, December 23, 1983, pp. 1283-1292; Carl Sagan, "Nuclear Winter and Climatic Catastrophe: Some Policy Implications," Foreign Affairs, Winter 1983/84, pp. 257-292.
28. Lieutenant General I.I. Dzhordzhadze and V. Osinskiy, "Apocalypse: Fantasy or Reality," Kommunisti (Communist), November 17-24, 1982.
29. L. Koryavin, "USSR-USA: Scientists' Forum," Izvestiya, December 11, 1983.
30. Yu. Petrovskiy, "You are Exposing the Grim Truth," Televideniye i Radiyoveshchanie (Television and Radio Broadcasting), No. 1, January 1984, pp. 24-25.
31. Academician Anatoliy Petrovich Aleksandrov, Speech at the Annual General Meeting of the USSR Academy of Sciences, March 14, 1984, Moscow Television, March 15, 1984. See also F. Burlatskiy, "U.S. Notes: Where Will the Pendulum Swing?" Literaturnaya Gazeta (Literary Gazette), May 23, 1984.
32. Army General A.T. Altunin, "Always in Readiness," Krasnaya Zvezda, October 3, 1982.
33. Radio Moscow in English, April 24, 1984, cited in Foreign Broadcast Information Service Daily Report: Soviet Union, April 25, 1984, p. VI.
34. Ibid.
35. Ibid., emphasis added.
36. Colonel A. Zaytsev, "Duties and Responsibilities of the Population," Voyennyye Znaniya, No. 12, December 1982, pp. 21-22.
37. Lieutenant General D. Mikhaylik, "The Training Year Has Begun," Voyennyye Znaniya, No. 12, December 1983, p. 10.
38. Ibid.
39. For example, see Mikhaylik, "Adopt the New and the More Advanced," op. cit.

40. Colonel General D. Krutskikh, "Perfect the Instruction Process," Voyennyye Znaniya, No. 12, December 1981, pp. 10-11.
41. For example, see Bayev, op. cit.; Abol, op. cit.; Chizh, op. cit.
42. Lieutenant General D. Mikhaylik, "A Useful Beginning," Voyennyye Znaniya, No. 1, January 1982, p. 16.
43. Colonel A. Rudenko, "On the Screen—Amateur Films," Voyennyye Znaniya, No. 12, December 1982, p. 19.
44. Ibid.
45. USSR Civil Defense, Eto Dolzhen Znat' i Umet' Kazhdyy (Everyone Must Know and Be Able To Do This), (Moscow: Voenizdat, 1984), passim.

Section 5

THE SOVIET LEVEL OF EFFORT IN THE CIVIL DEFENSE PUBLIC INSTRUCTION OF THE POPULATION

A civil defense instruction program for the Soviet population, which in January 1984 totaled 273.8 million persons, obviously is a formidable undertaking. True, the general public instruction program does not include pre-school children, the physically and mentally unfit, the personnel of the civil defense forces of 16-20 million who are subject to different civil defense training programs, or members of the Armed Forces (approximately 5 million). It does apply to some 39.5 million students in secondary school programs, 4 million students in vocational schools, 4.5 million in middle-level special schools, and 5.3 million students in institutions of higher learning, as well as to some 110 million workers, employees, and collective farm workers who are not members of the civil defense forces; to approximately 40 million retirees; and to several millions of non-working and self-employed adults.^{1/} In principle, therefore, the program encompasses in excess of 200 million Soviet citizens, with some 160 million of them—i.e., working and non-working adults—required by the current program to undergo annual instruction.

The program obviously requires a large number of instructors. Unfortunately, Soviet publications make no mention of the total number of instructors and supervisory personnel used in the program. In general, the program uses few full-time instructors. Those who are full-time are probably primarily members of civil defense staffs at various levels from the national to cities, rural rayons (counties) and large industrial enterprises who are responsible for the management of the program. They may number on the order of 6,000 to 7,000. Another group of full-time civil defense personnel involved in the program consists of the staffs of civil defense schools who instruct the leaders of civil defense formations and civil defense instructors.



There may be on the order of 5,000 to 6,000 civil defense schools at various levels; however, the size of their staffs is not known. In the educational system there are military instructors who teach military subjects as well as civil defense. It would appear that there are in excess of 63,500 such full-time instructors.^{2/} To this number must be added the 2nd grade teachers who teach the initial class in civil defense along with other subjects. Altogether, these various elements may constitute on the order of 75,000 to 100,000 persons involved in the instruction program.

In the case of the approximately 110 million working adults, they receive instruction at their places of work. The instructors are mostly department chiefs, shop foremen, engineers, technicians, members of medical departments or medical services, etc. who are part of the civil defense organization of the work places and teach on a part-time basis. According to Soviet sources, instruction is given to classes of 25 to 40 persons. This could mean that there would be between 2,750,000 and 4,400,000 classes set up each study year, assuming that every one of the 110 million persons attends the training course, which in practice is not the case. How many classes each instructor teaches probably varies a great deal. For example, if the average instructor were to teach ten classes each year—that is, teaches two sessions a week, each of 2-3 hours' duration—this could mean, in principle, that there would be a requirement for between 270,000 and 440,000 instructors. Of course, the instructors may carry a bigger teaching load, which would reduce this requirement, although it should be kept in mind that this may make excessive demands on the instructor's work or free time. Even if the number of working adults who actually receive instruction were significantly smaller—for example, 60 to 80 million, there could still be a requirement for between 150,000 and 320,000 instructors.

In addition, there are the instructors for the non-working element of the population, which in principle could constitute on the order of 50 million persons or more. In theory, this group may require on the

order of 150,000 to 200,000 instructors because classes tend to be smaller. Of course, a significant portion of the instructing personnel would be drawn from those who also instruct the working population and members of local civil defense staffs and schools. Furthermore, the actual number of non-working adults undergoing regular instruction is probably smaller than their total number. Even so, it is likely to be sufficiently large to require several tens of thousands of additional part-time instruction personnel.

Thus, even when using conservative assumptions, the total number of instructors involved in the civil defense public instruction program is unlikely to be less than 250,000 and probably is significantly greater. Of course, one reason for this is that the great majority of all Soviet civil defense instructors only teach in their free time. If the Soviets were to use full-time instructors in their program, especially to teach the working and non-working adult population, the required number of instructors would be markedly smaller. One reason this is not done is that in most instances the part-time instructors receive no pay for their teaching activities.

No cost estimates of the Soviet civil defense instruction program are feasible, given the absence of Soviet information on it or, for that matter, on the cost of the civil defense program as a whole. Even though most instructors are not paid and the trainees undergo instruction in their free time without compensation, the costs of the program appear to include the following elements:

- Cost of full-time personnel, i.e., members of civil defense staffs, instructors at civil defense schools, military instructors at educational institutions, various planners and supervisory personnel, etc.
- Cost of equipping classrooms with necessary furniture, lights, and other essential equipment.
- Cost of instructional supplies and equipment, i.e., gas masks and protective suits, dosimeters and radiation meters, first aid supplies,

tools, decontamination kits, posters, books, slides and film, projection equipment, etc.

- Cost of training instructors at civil defense schools and special training courses, which appears to require the trainee to be absent from work for five to ten days at full pay.

- Cost of the construction and maintenance of special civil defense training sites and facilities, of which a large number are reported to have been built. In the 1970s Soviet publications mentioned the cost of the construction of such sites as ranging from 12,500 to 73,000 rubles.^{3/} Such sites are built not only at rural county and urban district levels, but also at large industrial enterprises and economic facilities. While the total cost over the past decade may be well in excess of one billion rubles, it should be kept in mind that these sites and facilities are used primarily for the training of civil defense units. Even so, especially in the current three-year public instruction program, they are also to be used for the training of the general population.

- Cost of the participation of elements of the general population in civil defense exercises, especially evacuation exercises. While the trainees are not paid for their time, the exercises involve the use of transportation, the feeding of the participants, the time of supervisory personnel, etc.

- Cost of administration of the program and of studies and analyses of its results, problems, and shortcomings, etc., including on-site inspection by civil defense inspection personnel.

A different set of costs are incurred in connection with civil defense propaganda which is another aspect of the public instruction program. Included in such costs would be:

- The use of newspapers and of radio and television broadcast time, although it all comes under the heading of public service. Nevertheless, there are some real costs involved to the mass media when used for this purpose.

- Preparation of newspaper articles and broadcast materials by newspapers and radio and television stations.
- Production of civil defense films and their distribution.
- Production of posters and other visual propaganda materials.
- Publication of civil defense manuals, books, pamphlets, journals and leaflets.
- Public civil defense lectures.
- Public civil defense exhibits.

While the cost of the public instruction program is not known, it appears likely that despite its scope, it is less than the cost of training and equipping the civilian members of the civil defense forces. Furthermore, as was noted, the latter program contributes greatly to the instruction of the general public in terms of instructors, training facilities, supplies and equipment, and exercises; and both elements are targeted by the civil defense propaganda.

Although the Soviet program provides indications of the elements which are likely to enter into the costs of a civil defense public instruction program in the United States, if such a program were to be considered or adopted here, it would not be a useful guide to the estimation of the cost of a U.S. program, even if Soviet expenditures were known. The two countries and their costing systems are just too different. In any event, the Soviet authorities do not appear to regard either the cost of their program or the requirement for large numbers of instructors to be an obstacle to its implementation. The shortcomings in the implementation of the program have other causes, i.e., organizational, bureaucratic, attitudinal, and so on, and their solution does not appear to depend primarily on the need for greater investments in the instructional effort.

AD-A144 834

SOVIET CIVIL DEFENSE PUBLIC INSTRUCTION AND TRAINING
PROGRAMS(U) SCIENCE APPLICATIONS INC MCLEAN VA CENTER
FOR SOVIET STUDIES L GOURE AUG 84 SA1-84/1298

22

UNCLASSIFIED

EMW-C-0571

F/G 5/9

NL

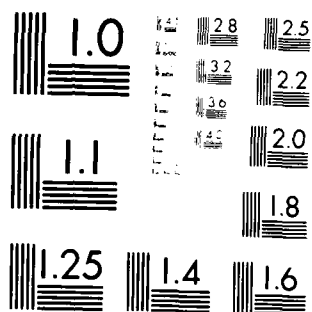
END

DATE

FILED

9-84

DTIC



MICROCOPY RESOLUTION TEST CHART
 NATIONAL BUREAU OF STANDARDS-1963-A

Section 5

FOOTNOTES

1. Vestnik Statistiki (Statistical Herald), No. 9, September 1983, p. 58, No. 11, November 1983, pp. 77-78; USSR Central Statistical Administration, Narodnoye Khozyastvo SSSR v 1982 Godu (USSR National Economy in 1982), (Moscow: Finansy i Statistika, 1983), pp. 454, 456.
2. The estimate is based on the existence in the Soviet Union of 58,100 secondary and vocational schools, 4,500 middle-level technical schools, and 891 institutions of higher learning. For example, see Vestnik Statistiki, No. 7, July 1983, pp. 65, 67.
3. Colonel A. Zaytsev, "A Double Advantage," Voennoye Znaniya (Military Knowledge), No. 1, January 1974, p. 25. At present, the official exchange rate is 1 ruble = \$0.70 U.S.

Section 6

POSSIBLE LESSONS FOR THE U.S. CIVIL DEFENSE PUBLIC INSTRUCTION PROGRAM

Given that appropriate actions by the population are critical for the effective implementation of civil defense measures in an emergency and in general for mitigating human losses and damage in peacetime disasters or wartime conditions, instruction of the population in civil defense is not only important but essential. The organization and methods of involvement of the general population in civil defense instruction pose particular problems and do reflect the political, administrative, and social organization as well as attitudes of the population of a given state. It is obvious that a totalitarian state such as the Soviet Union, with its control over the population, has little difficulty in imposing upon its population compulsory participation in civil defense instruction as a part of each citizen's duties to the state. Yet, as the examples of Switzerland, Sweden, and Finland demonstrate, such programs can also be implemented in democratic states provided that a majority of the population acquiesce to them. Essential to such acquiescence is public recognition of the utility of civil defense in general and the acquisition by individuals of appropriate civil defense knowledge and skills as a means of enhancing their own protection. It would appear that in democratic countries the greatest hurdle is the initial public acceptance of an instruction program and, for that matter, of a significant civil defense effort of which such a program is a part. Obviously, without credible state measures for protection of the population against a possible nuclear attack, a public instruction program by itself will not be taken seriously by a majority of the citizens. It is likely, however, that once such a program is in place, it will become increasingly accepted by the public as a "routine" activity.

Undoubtedly, any public civil defense instruction program for protection against a possible nuclear attack leads people, to one degree

or another, to "think about the unthinkable." It is argued by some people that this could have an adverse influence on the public's attitude towards civil defense. Indeed, Soviet civil defense officials do note that some elements of the population, especially women, are "turned off" by detailed technical descriptions of weapons effects, and it is recognized that emphasis on the destructiveness of modern weapon and "worst-case" attack scenarios may engender a sense of hopelessness and skepticism about the effectiveness of civil defense. At the same time, however, the public needs to understand the character of the threat not only because it justifies the need for civil defense and for a public instruction program, but also because such information is essential for ensuring appropriate actions by the population in the event of a nuclear war. The issue, therefore, is not whether the public should be familiarized with the nuclear threat, but what and how it should be told about it. Indeed, various groups in the United States, which are usually opposed to civil defense, have been insisting that the population should be made to "think about the unthinkable," and have been popularizing an image of a nuclear war in terms of a "worst-case" scenario in which the citizens' prospect for survival is very slim. The problem, therefore, is to convince the public that not only are there more plausible scenarios than the "worst-case" one, but that civil defense offers rational and effective prospects for significantly mitigating the consequences of a nuclear attack.

The Soviet approach to this problem may offer some useful lessons, although it should be emphasized that in the Soviet Union there are no public descriptions of specific attack scenarios on the USSR or speculations about their possible consequences, including the numbers of possible casualties.

- The key argument is that civil defense pursues "humanitarian" objectives: it is intended to "save people's lives," and that is a worthy goal in which the population has a vital stake.

- Civil defense cannot promise that everyone will survive, but it can greatly reduce losses if the population knows what to do and acts in an appropriate manner to enhance its survivability.

- Civil defense measures for the protection of the population will not be effective without appropriate actions on the part of the population, i.e., knowledge to take effective advantage of civil defense measures and to implement them. Otherwise, people may panic and behave in a manner which could result in unnecessary losses.

- It is argued that by studying civil defense, the individual not only enhances prospects for saving his own life but also the lives of members of his family and friends. This tends to emphasize the individual's duty to his loved ones and friends and implies that his failure to acquire necessary knowledge and skills in civil defense may contribute to their death or injury.

- As long as the threat of a nuclear war or, for that matter, war in general has not been eliminated by political and arms control means, it is the duty of the government to take necessary steps to mitigate the consequences of a nuclear war, even if the probability of its occurrence is very low and the government is doing all it can to avert it. It is worth noting that the Soviets buttress their argument for civil defense with discussions of the Soviet government's efforts to deter an enemy attack and to achieve arms control agreements with the West. This serves to underscore the peaceful intentions of the Soviet Union, while at the same time arguing for the need for civil defense in an uncertain and dangerous international environment.

- The Soviet argument that no offensive weapon system, not even nuclear armed missiles, is "absolute" is of interest. History is said to show that a reasonably effective defense is usually devised against each offensive weapon system and that nuclear weapons are no exception to this. At the present time this view is reflected in President Reagan's "Strategic Defense Initiative" and in statements by Soviet military leaders who view this as an inevitable and natural dialectic process.

- Soviet civil defense appeals to both the citizens' self-interest and to their civic duty when requiring them to undergo civil defense instruction and prepare themselves to actively participate in the implementation of civil defense measures. Of course, the appeal to self-interest is basic to any civil defense instruction program. The appeal to civic duty, however, may not be as effective in peacetime in the United States as in the Soviet Union where the citizen's duty to the state is equated with his loyalty to the political system and his leadership, his patriotism, his social responsibilities, and his contribution to the strengthening of the country's security and defense capabilities. Furthermore, in the Soviet Union a citizen's refusal to "do his duty" and to respond to the demands of the Party and the state are viewed in a much harsher light and carry far greater penalties than is the case in the United States. While insistence of the citizen's "duty" to study civil defense may not generate a desired response in the United States—although many people share a sense of "duty" to their community or group, appeals to the American citizen's patriotism may be of value.

- Two Soviet justifications for public civil defense instruction may not be relevant in the United States. One results from the Soviet requirement that key workers of essential economic enterprises, installations and services must continue to work in risk areas, even under conditions of a nuclear war. The Soviets argue, therefore, that the workers must be instructed in civil defense for their own protection and in order to implement measures to reduce the vulnerabilities of their work places to damage. The other is the Soviet requirement for possible active participation of the population in post-strike rescue and damage-limiting operations in areas of nuclear destruction. While such operations would be conducted primarily by the civilian and military civil defense forces, Soviet citizens are liable to be conscripted to assist them and, therefore, should be given the necessary instruction and training. At the present time, U.S. civil defense does

not have similar requirements, although any public civil defense instruction program is likely to contain study subjects which would be relevant to post-strike rescue operations (for example, first aid and care for casualties, possibly firefighting, removing people from damaged shelters, etc.).

- While not going as far as the Soviet civil defense system in the matter of requirements for the citizens' active participation in civil defense operations, an important factor for justifying the need for U.S. civil defense instruction of the population could be a clear and precise description of the American citizen's responsibilities for implementing civil defense measures and ensuring his protection. Obviously, U.S. civil defense also demands more of the citizens than merely the following of instructions in a time of emergency and relying on the government and local civil defense authorities to provide the means of protection. Indeed, the citizen—even while hopefully obeying instructions and orders from the civil defense authorities—will be required to show a considerable amount of initiative as well as ability to protect himself (for example, in the construction of fallout shelters, in the use of first aid, etc.). The citizen, therefore, must know what will be done for him and what he must do himself in various circumstances for his own protection and that of his loved ones.

It appears doubtful that in peacetime conditions it would be feasible to establish a compulsory civil defense instruction program for the population in the United States. As a practical matter, this would be very difficult to do even if there was widespread public support for a civil defense program. In principle, as in the case of the Soviet Union, the two most suitable places for such instruction would be in the educational system and in the work place, with the additional participation of various civic organizations. Ideally, civil defense instruction could be part of the compulsory curriculum of junior and senior high school classes and of institutions of higher learning, which already have such required courses as physical education. Given the character

of the American educational system and of its administration, however, the implementation of such a program would be fraught with many difficulties. As to instruction in the work place during the employee's free time, it is unlikely that, at least in peacetime, the employers, unions, or workers would be willing to accept such a burden. Compulsory instruction of the non-working population would probably be impractical and would have to be limited to voluntary attendance of lectures, such as may be organized as a part of adult education programs.

One way to spread civil defense knowledge and training among the population could be if the United States were to adopt the Swiss system in which a portion of the population is required by law to serve in the civil defense forces and undergo appropriate training for this purpose. The turnover of personnel in these forces could ensure that over time an increasing percentage of the population has been trained in civil defense.

As the Soviet experience indicates, any instruction program for the population requires well-trained and skillful instructors. The proper selection of instruction personnel is of some importance because poor and boring speakers and those unable to effectively adjust to the character of their audiences and to answer unexpected questions can be counterproductive. The organization of training of instructors will depend on the character and magnitude of the public instruction program. Given the magnitude of this program in the Soviet Union, it makes sense to establish civil defense training courses in cities and large-city boroughs and in the counties. A more limited instruction program may organize civil defense training of instructors by civil defense personnel attached to local civil defense offices, although such personnel would probably also have to first undergo instruction in state, regional, or federal programs.

The content of the Soviet public instruction program is probably more comprehensive and elaborate than is likely to be needed in the United States. A U.S. program may also want to devote more time to

certain topics—for example, evacuation—than is given them in the Soviet program. As to the length of an instruction course, something on the order of 20-24 hours per year, concentrated during the Fall to Spring period, appears to be reasonable.

A particular issue for any public instruction program is the frequency of repetition of instruction courses and of additional courses. First of all, it should be noted that in the Soviet Union prior to 1973, the instruction of the population in a given civil defense course of 18 to 21 hours required several years to complete. Second, the introduction of the 20-hour minimum instruction course in 1973, which was repeated yearly, posed different problems. Thus, while the yearly repetition of the same materials may have enhanced the likelihood of the instructions being retained by the population, it also tended to become extremely boring, irritating, and therefore risked engendering a negative attitude towards civil defense. Yet, some sort of repetition or "refresher" instruction is undoubtedly desirable and necessary, although it need not be on a yearly basis. The Soviet's present attempt to move away from mere repetition of basic instruction to a system of successive elaboration of the instruction content and of practical training may offer an answer to the problem. The Soviets believe not only that practical training is not only necessary, valuable, and avoids the boredom problem, but also that such training—when combined with demonstrations of civil defense protective measures (for example, shelters), helps to overcome public skepticism about the utility and effectiveness of civil defense.

In the absence of a formal public instruction program, other methods of informing the public may be used. For example, there is wide dissemination among the general population in the Soviet Union of the civil defense instruction pamphlet, Everyone Must Know and Be Able To Do This. A similar pamphlet was distributed to the public in the United States in the 1960s through the postal system. Both Soviet and U.S. experience indicates, however, that in peacetime the public is unlikely to pay much attention to such pamphlets or derive much practical

benefit from them. This is probably why such pamphlets are used in the Soviet Union as text books in civil defense instruction courses, and their content and recommendations are reinforced by lectures and exercises. At a minimum, therefore, it appears desirable that any dissemination of an instruction pamphlet be paralleled by a public lecture program to help explain the pamphlet's contents and to answer questions. Furthermore, as far as it is practical, the instruction pamphlet should be tailored to the specific interests and needs of various categories of the population (for example, residents of large cities, residents of small towns and rural areas, residents near potential strategic targets, etc.). Instruction posters and instruction pages in telephone books are most likely to be paid attention to only in crisis or emergency situations.

There is no doubt that the mass media can play a very important role in the instruction of the population. In the Soviet Union, where the media is under state control, the regular publication of articles on civil defense in the press and the organization of regular weekly or biweekly radio and television programs on this subject poses no difficulty. In the United States this could only be done if it were mandated by Congress or on a voluntary basis as a public service. The latter, which appears more likely, would largely depend on the degree of public interest in civil defense. In any event, as the Soviet experience indicates, close cooperation between the media and local civil defense authorities would be necessary to ensure the quality of the information, and the media would probably expect the civil defense authorities to provide visual materials. Civil defense films for viewing on television and in motion picture theaters could be a most important source of public instruction. However, as the Soviets note from their experience, public receptivity of such films would depend upon their quality and how effectively the instructional materials are presented. This probably would mean that the film must not only instruct but also entertain.

By the Soviets' own admission, the civil defense instruction programs and propaganda have not succeeded in overcoming all skepticism about the effectiveness of civil defense or apathy towards it among the Soviet public. As a result of civil defense instruction, the average Soviet citizen knows a great deal more about the effects of nuclear, chemical and bacteriological weapons than his American counterpart. To what extent this knowledge has been an obstacle to instilling in Soviet citizens "confidence" and "faith" in the effectiveness of civil defense plans and measures is not clear. It is likely that present Soviet anti-war propaganda which portrays the outcome of a nuclear war in terms of a global holocaust contributes to some extent to this skepticism. Yet, Soviet emigres appear to suggest two other reasons for it, which may be especially significant in influencing Soviet public attitudes. First is the belief that a war would begin with an American surprise attack on the Soviet Union, which Soviet leaders and propaganda persistently claim is being planned by the United States. In such a "worst-case" scenario, many of the Soviet citizens who believe themselves to be in the likely target areas for U.S. strikes (for example, in large cities or near major factories) do not expect that there would be sufficient time to implement civil defense measures and that there would not be enough blast shelter spaces for everyone. The second is the general popular view of the Soviet system and its bureaucracy as being highly inefficient, which leads at least some people to anticipate that in an emergency Soviet civil defense plans will be implemented in an inefficient and chaotic manner and, therefore, will be in part ineffective.

Both such beliefs are also found in the United States. It is probably true that skepticism derived from an expectation of an enemy counter-city surprise attack can only be dealt with by providing all residents at risk with protection in blast shelters. As to the view which equates emergency civil defense measures with chaos and panic, it will be up to the civil defense instruction program to make a convincing case to the contrary and to show that such conditions are most

likely to occur among an uninformed population. It is also necessary to distinguish between skepticism and hostility towards civil defense and any instruction program. People who entertain doubts about their prospects for survival may nevertheless be interested to learn what they can about how to protect themselves, or at least do so for the sake of their families. Hostility to civil defense appears to derive primarily from the belief that civil defense either increases the danger of occurrence of a nuclear war or that it threatens strongly held beliefs in various "solutions" to the nuclear war problem, such as stability based on mutual assured destruction, arms control and disarmament, and so on. Obviously, unless a majority of the public is persuaded otherwise, no major civil defense program for the protection of the population in a nuclear war situation is likely to be adopted.

Section 7

CONCLUSIONS

In principle and also as a matter of practice, the character and scope of a civil defense public instruction program can be very different. It will depend on various factors, among them the character and organization of civil defense and the measures planned and taken for the protection of the population; the extent to which a given country's political system, social organization, and public attitudes permit such a program to be carried out in peacetime; and also on how much purposeful initiatives and actions by the population are believed to be required for the implementation of civil defense measures in an emergency. At one end of the spectrum of such programs are those which confine themselves to issuing to the public instructions and recommendations only in times of emergency. At the other end there are programs, such as the one in the Soviet Union, which involve most of the population in peacetime in continuous, compulsory instruction and training in civil defense.

The Soviet approach to the question of civil defense instruction of the population is based on the belief that it is a necessary—indeed, essential—element of an effective civil defense program and capability for its protection in the event of a nuclear war and also in peacetime disasters. It recognizes that the implementation of civil defense measures in an emergency requires the active and purposeful participation of the population. Furthermore, it is believed that without such instruction, the population will be unable to make effective use of civil defense measures carried out by the authorities for its protection, and that in an emergency, this would increase the probability of widespread panic and of behavior which could result in unnecessary damage and loss of lives.

The Soviet system of control over the population makes it possible to impose civil defense instruction on everyone from 2nd grade students

through retirees. It is able to treat not only students throughout the educational system but also the working population at their places of employment and retirees and non-working adults in residential areas as what may be characterized as "captive" audiences for instructional purposes, and it has devised specific instruction programs for each of these three elements of the population. Furthermore, given that since 1955 the Soviet Union has had eight successive civil defense public instruction courses, it has had a great deal of experience in how to organize and conduct them, while the frequency with which the population has been required to undergo instruction has ensured that since the 1950s at least a majority of the population has been repeatedly exposed to such instruction.

The content of the instruction courses has reflected the changing character of the Soviet civil defense program and Soviet perceptions of the threat, as well as Soviet views on requirements for active participation of the population in the implementation of civil defense measures. Actually, Soviet civil defense minimizes independent actions and initiatives by the population in emergency situations. However, it sees a requirement for the population to be prepared to follow instructions in the course of the implementation of civil defense measures and to be able to make effective use of civil defense equipment and facilities. In addition, it expects the population to possess the necessary knowledge and skills to actively participate in the construction of fallout shelters, the protection of agricultural resources, and in post-strike rescue and damage-limiting operations, including the administration of first aid to oneself and others. These requirements also reflect two particular concepts of Soviet civil defense. The first is the intention, in the event of a war, to continue essential production and services at key enterprises and installations in risk areas and, consequently, to maintain shifts of workers at them on a continuous basis. The other, associated with the first, is to conduct large-scale, post-strike rescue, damage-limiting and emergency repair operations in areas of nuclear damage

during which elements of the general population can be conscripted to actively assist the civil defense forces.

Despite some variations in the instruction courses, they have been characterized more by the similarity rather than the differences of their content. True, increasing efforts were made to supplement lectures in theory with practical instruction and exercises, but on the whole, the public has been exposed yearly—or nearly so, especially since 1973—to the same information. In theory, the advantage of this repetitiveness of instruction is that it can succeed in instilling in the public necessary information and skills regardless of its attitude towards the program. In practice, this approach appears to have been less than entirely successful.

The failings of the instruction program, which the Soviet authorities publicly acknowledge to exist, have not primarily been the result of insufficient resources or shortages of instructors, although it has taken considerable time to make available sufficient instructional materials and supplies. The main causes of shortcomings appear to be a combination of bureaucratic inertia, the reluctance of some managers and officials to devote the necessary attention to the program, fairly frequent instances of low quality instruction, and some degree of lack of interest, boredom and skepticism in the attitude of the instructed population. The authorities have attempted to deal with the bureaucracy and managers in their traditional manner—i.e., by intensifying party supervision, exhortations, public criticism of failures and praise of successful managers and officials, and finally with threats of punishment. In the matter of public attitudes, the two main approaches have been appeals to the individual's self interests in enhancing his and his loved one's chances of survival and to the Soviet citizen's loyalty and patriotic duty to conscientiously carry out what the state asks him to do and to contribute to the strengthening of the Soviet Union's defense capability by effective participation in the civil defense program.

The Soviets claim to see a correlation not only between the quality of instruction and the public's receptivity to it, but also between the individual's skepticism and demonstration of evidence of practical measures being taken by the authorities for his protection. In the first case, it is believed that skillful instruction by well trained instructors who are sensitive to the character of their audiences is necessary in order to stimulate the public's interest and hold its attention, thereby ensuring retention of the content of the instruction course. In the second case, civil defense instruction without evidence of serious measures being taken for the population's protection—for example, the construction of shelters—lacks credibility and therefore reinforces any overt or latent skepticism among the population, thereby leading to its unwillingness to listen and learn.

It is not possible to determine the impact of the large-scale Soviet civil defense propaganda effort—intended to reinforce the instruction program and to stimulate public interest in civil defense—on the attitude of the Soviet population. Presumably it serves a useful purpose in the case of those elements of the public who are interested in this subject, but whether it has any influence on those who are not is not known.

The Soviet public instruction program does not appear to have fully solved the dilemma of how to explain to the population the effects of "weapons of mass destruction" while at the same time seeking to instill in it "confidence" in the effectiveness of civil defense. As in the United States, this problem appears to be aggravated by the anti-nuclear campaign, which portrays the outcome of a nuclear war as the "destruction of civilization" and the death of a great part, if not eventually all of mankind. One of the contributory factors to public skepticism is the expectation, which Soviet anti-U.S. propaganda has helped to generate, that a nuclear war would probably begin with an American surprise strike on the Soviet Union, which would not allow time for the implementation of civil defense measures. Another contributory

factor is the citizen's image of Soviet inefficiency and bureaucratic inertia which leads to doubts about the ability of USSR Civil Defense to rapidly and effectively implement its plans in an emergency. Of course, skepticism does not necessarily preclude Soviet citizens from learning about civil defense and acquiring the skills taught in the public instruction program. Still, as Soviet officials acknowledge, the degree of retention of civil defense instructions among the general public is not as high as the authorities expect. They tend to blame this primarily on low quality of instruction and on the boredom generated in the audiences by the repetitiveness of the lessons taught, which tends to encourage people to try to avoid attending classes and to not listen to the instructors. Of course, the fact that people have to give up their free time or interrupt other activities in order to attend instruction classes and have to do so year after year undoubtedly also has an adverse affect on the population's attitude towards the instruction program.

It remains to be seen whether the new three-year instruction course, with its greater emphasis on practical training, will be able to overcome some of the program's previous problems and to stimulate greater public interest. In any event—for all of its shortcomings—the Soviet civil defense public instruction program appears to have been reasonably successful in teaching civil defense to a large percentage of the population, which may prove to be of great value in an emergency.

DISTRIBUTION LIST

(One copy unless otherwise indicated)

Federal Emergency Management Agency
ATTN: NP-CP-CD (Dr. B. W. Blanchard)
Washington, D.C. 20472 (80)

Defense Technical Information Center
Cameron Station
Alexandria, VA 22314 (12)

Dr. Richard L. Wagner
Assistant to the Secretary (Atomic Energy)
Room 3E1074
The Pentagon
Washington, D.C. 20301

Dr. Benson D. Adams
OSD (AE)
Room 3C124
The Pentagon
Washington, D.C. 20301

Maj. Gen. R. T. Boverie
ODUSD, Room 4C767
The Pentagon
Washington, D.C. 20301

Dr. Robert Harten
OSD (PA&E)
Room 2E286
The Pentagon
Washington, D.C. 20301

LTC Donald Anselm
Joint Chiefs of Staff (SAGA)
Room 10928
The Pentagon
Washington, D.C. 20301

Mr. Dennis M. Nagy
Defense Intelligence Agency
DE-2
Washington, D.C. 20301

Federal Emergency Management Agency
National Preparedness Programs Directorate
Office of Research
ATTN: Assistant Associate Director
Washington, D.C. 20472 (3)

Los Alamos Scientific Laboratory
ATTN: Document Library
Los Alamos, New Mexico 87544

The Rand Corporation
ATTN: Document Library
1700 Main Street
Santa Monica, CA 90401

Mr. Gordon Megus
Defense Intelligence Agency
Department of Defense
Washington, D.C. 20301

Mr. Donald Wood
Defense Intelligence Agency
DB-4D1
Washington, D.C. 20301

Mr. Morton J. Rubenstein
Defense Nuclear Agency
ATTN: VLWS
Washington, D.C. 20305

Dr. Paul Castleberry
Defense Nuclear Agency
6801 Telegraph Road
Washington, D.C. 20305

Assistant Secretary of the Army (R&D)
ATTN: Assistant for Research
Washington, D.C. 20301

Chief of Naval Research
Washington, D.C. 20350

Captain Donald Rightmeyer
Directorate of Soviet Awareness
Building 520
Bolling Air Force Base
Washington, D.C. 20332

Captain Jim Cook
AF/INESS, Building 520
Bolling Air Force Base
Washington, D.C. 20332

National Security Council
Old Executive Office Bldg.
Washington, D.C. 20506

Mr. Richard Wilcox
Strategic Program Bureau
Arms Control and Disarmament Agency
Department of State Building
Washington, D.C. 20451

Office of Strategic Research
Central Intelligence Agency
Washington, D.C. 20505

Ms. Linda Varacalli
Defense Forces Branch
Strategic Forces Division
Office of Strategic Research
Central Intelligence Agency
Washington, D.C. 20505

Civil Defense Research Project
ATTN: Librarian
P.O. Box X
Oak Ridge, TN 37830

Dr. Conrad V. Chester
Oak Ridge National Laboratory
Building 4500-S, Room S-240
Post Office Box E
Oak Ridge, TN 37830

RAFM Joseph Russel, USN (Ret.)
Boeing Aerospace Corporation
P.O. Box 3999
Seattle, Washington 98124

Mr. Walmer Strobe
Center for Planning and Research, Inc.
5600 Columbia Pike, Suite 101
Bailey's Crossroads, VA 22041

Dr. Leo A. Schmidt
Institute for Defense Analyses
1801 N. Beauregard Street
Alexandria, VA 22311

Dr. Ellery B. Block
Science Applications, Inc.
2109 West Clinton Avenue, Suite 800
Huntsville, Alabama 35805

Dr. Roger Barnett
SRI International
1611 North Kent Street
Arlington, VA 22209

Distribution List, Cont.

Dr. Roger Sullivan
System Planning Corporation
Suite 1500
1500 Wilson Boulevard
Arlington, VA 22209

Mr. Robert M. Spencer
Federal Research Division
Reader's Services/MAA
Library of Congress
Washington, D.C. 20540

Federal Emergency Management Agency
Intelligence Officer (Mr. Michael Murray)
Room 526
Washington, D.C. 20472

Central Intelligence Agency
National Photographic Interpretation Center
ATTN: Mr. Peter Upton
Washington, D.C. 20505

OUSDRE (S&TNF)
Room 3E130
ATTN: Mr. T. K. Jones
The Pentagon
Washington, D.C. 20301

Department of State
ATTN: Mr. Jonathan Mayhew
INR/SEE, Room 4751
Washington, D.C. 20520

ODSD (P)/C2 Policy
ATTN: Col. Gonzales
Room 2C252
The Pentagon
Washington, D.C. 20301

Dr. Loran Szalay
Institute of Comparative Social and
Cultural Studies
4330 East-West Highway, Suite 900
Bethesda, MD 20014

Deputy Chief of Staff, Intelligence (IN)
Strategic Air Command
Offutt AFB, NB 68113

Deputy Director
National Strategic Target List
Directorate (JL)
Joint Strategic Target Planning Staff
Offutt AFB, NB 68113

Secrétaire d'Administration
Ministère de l'Intérieur
Direction Générale de la Protection Civile
Rue de Louvain, 1
1000 Brussels
BELGIUM

Canadian Defence Research Staff
Attn: Dr. K.N. Ackles
2450 Massachusetts Avenue, NW
Washington, D.C. 20008 (2)

The Head of Civilforsvarsstyrelsen
Stockholmsgade 27
2100 Copenhagen O
DENMARK

Direction de la Sécurité Civile
Ministère de l'Intérieur
18 Rue Ernest Cognac
92 Levallois (Paris)
FRANCE

Bundesministerium des Innern
Graurheindorfer Strasse 198
5300 Bonn 1
WEST GERMANY

Ministry of Social Services
11 Spartis Street
Athens
GREECE

Office of Civil Defence
Almannavarnir Skrifstofa
Reykjavik
ICELAND

Stato Maggiore Difesa Civile
Centro Studi Difesa Civile
Rome
ITALY

Civil Emergency Planning Directorate
North Atlantic Treaty Organization
1110 NATO
BELGIUM

Jefe, Sección de Estudios y Planificación
c/Evaristo San Miguel, 8
Madrid-8
SPAIN

Ministero dell'Interno
Direzione Generale della
Protezione Civile
00100 Rome
ITALY

Directeur de la Protection Civile
Ministère de l'Intérieur
36 Rue J.B. Esch
Grande-Duché de
LUXEMBOURG

Directeur Organisatie
Bescherming Bevoling
Ministry of Interior
Schedeldoekshaven 200
Postbus 20011
2500 The Hague
NETHERLANDS

The Head of Sivilforsvaret
Sandakerveien 12
Postboks 8136
Oslo-dep
Oslo 1
NORWAY

Servico Nacional de Protecção Civil
Rua Bela Vista a Lapa, 57
1200 Lisbon
PORTUGAL

Civil Defense Administration
Ministry of Interior
Ankara
TURKEY

Home Office
Scientific Research and Development
Branch
Home Defense Research Section
Horseferry House
Dean Ryle Street
London SW1P 2AW
ENGLAND

SOVIET CIVIL DEFENSE PUBLIC INSTRUCTION AND TRAINING
PROGRAMS

Dr. Leon Goure, Science Applications, Inc., McLean, VA
FEMA Contract No. EMW-C-0571, FEMA Work Unit No. 4212F
August 1984, 99 pages, Final Report, Unclassified.

This report describes and analyzes, on the basis of
open Soviet source materials, Soviet Civil Defense
plans, organization, content, magnitude, effectiveness
and shortcomings of the public instruction and train-
ing programs.

SOVIET CIVIL DEFENSE PUBLIC INSTRUCTION AND TRAINING
PROGRAMS

Dr. Leon Goure, Science Applications, Inc., McLean, VA
FEMA Contract No. EMW-C-0571, FEMA Work Unit No. 4212F
August 1984, 99 pages, Final Report, Unclassified.

This report describes and analyzes, on the basis of
open Soviet source materials, Soviet Civil Defense
plans, organization, content, magnitude, effectiveness
and shortcomings of the public instruction and train-
ing programs.

SOVIET CIVIL DEFENSE PUBLIC INSTRUCTION AND TRAINING
PROGRAMS

Dr. Leon Goure, Science Applications, Inc., McLean, VA
FEMA Contract No. EMW-C-0571, FEMA Work Unit No. 4212F
August 1984, 99 pages, Final Report, Unclassified.

This report describes and analyzes, on the basis of
open Soviet source materials, Soviet Civil Defense
plans, organization, content, magnitude, effectiveness
and shortcomings of the public instruction and train-
ing programs.

SOVIET CIVIL DEFENSE PUBLIC INSTRUCTION AND TRAINING
PROGRAMS

Dr. Leon Goure, Science Applications, Inc., McLean, VA
FEMA Contract No. EMW-C-0571, FEMA Work Unit No. 4212F
August 1984, 99 pages, Final Report, Unclassified.

This report describes and analyzes, on the basis of
open Soviet source materials, Soviet Civil Defense
plans, organization, content, magnitude, effectiveness
and shortcomings of the public instruction and train-
ing programs.